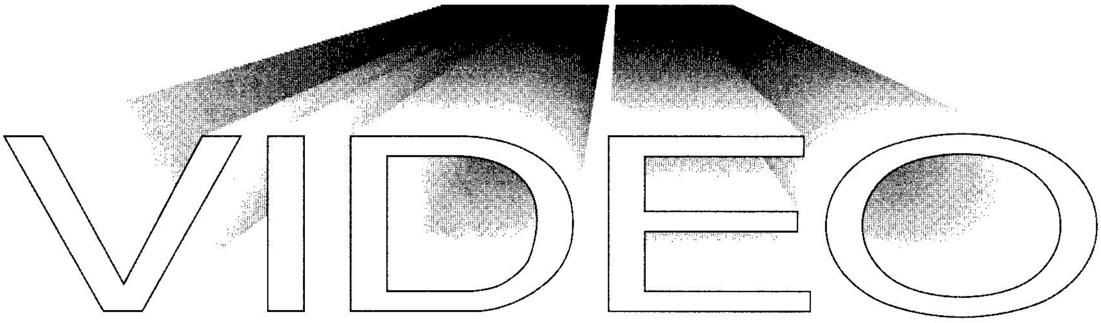
● BLAUPUNKT
Bosch Telecom

Video Recorder
RTV-830 EGC
7 618 827

Kundendienstschrift · Service Manual

Ⓓ **Btx ✶ 30 39 681 #**

MC/VKD 1 D92 420 010



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Service Manual NV-F 77 EG	see enclosure

ET-Liste zur Explo Nr. 1
Spare Parts List to Explo No. 1

Lfd. Nr. Item No.	Bestell-Nr. Part No.
5	8 619 416 100
6	8 619 530 638
7	8 619 530 639
10	8 619 416 802
11	8 619 419 150
12	8 619 414 631
13	8 619 414 206
14	8 619 419 325
15 0,5 mm	8 619 417 411
15 0,3 mm	8 619 417 412
15 0,2 mm	8 619 417 413
17	8 619 434 602
18	8 619 419 151
20	8 619 414 409
23	8 619 429 208
24	8 619 419 152
25	8 619 419 153
26	8 619 414 633
27	8 619 419 154
29	8 619 520 538
31	8 619 417 520
32	8 619 316 604
33	8 619 312 507
34	8 619 530 637
35	8 619 414 554
36	8 619 419 504
37	8 619 419 157
38	8 619 414 634
39	8 619 530 461
40	8 619 414 635
41	8 619 414 555
42	8 619 417 521
43	8 619 414 369
44	8 619 417 235
45	8 619 419 321
46	8 619 419 610
47	8 619 419 159
48	8 619 414 637
49	8 619 416 103
50	8 619 510 314
51	8 619 416 307
52	8 619 212 560
53	8 619 510 421
54	8 619 510 630
55	8 619 520 224
57	8 619 416 308
58	8 619 510 422
59	8 619 520 473
60	8 619 414 218
61	8 619 419 326
62	8 619 510 353
63	8 619 414 220
64	8 619 417 363
65	8 619 510 497
66	8 619 520 501
67	8 619 414 221
68	8 619 417 231
69	8 619 414 638
70	8 619 419 611
71	8 619 419 324
72	8 619 414 223
76	8 619 417 522
80	8 619 419 149
84	8 619 417 183
85	8 619 419 327
86	8 619 510 315
87	8 619 419 160
88	8 619 419 161
89	8 619 419 328
90	8 619 419 162
92	8 619 419 164
93	8 619 580 294
94	8 619 419 165
95	8 619 510 498
96	8 619 429 406
97	8 619 510 409
98	8 619 499 708
99	8 619 520 454

ET-Liste zur Explo Nr. 2
Spare Parts List to Explo No. 2

Lfd. Nr. Item No.	Bestell-Nr. Part No.
100	8 619 414 409
101	8 619 419 612
103	8 619 419 166
104	8 619 419 167
105	8 619 419 168
106	8 619 414 642
107	8 619 419 169
108	8 619 419 331
109	8 619 416 126
110	8 619 414 229
111	8 619 419 319
112	8 619 414 352
113	8 619 414 357
114	8 619 416 309
115	8 619 414 354
116	8 619 419 317
117	8 619 414 643
118	8 619 414 358
119	8 619 414 346
120	8 619 414 351
121	8 619 411 402
122	8 619 414 230
123	8 619 414 231
124	8 619 414 644
125	8 619 414 232
127	8 619 419 322
128	8 619 419 332
129	8 619 414 233
130	8 619 414 234
131	8 619 414 235
132	8 619 417 910
133	8 619 510 349
135	8 619 429 405
136	8 619 416 105
137	8 619 419 323
138	8 619 419 318
139	8 619 414 645
140	8 619 414 236
141	8 619 419 333
142	8 619 419 315
143	8 619 416 313
144	8 619 419 171
145	8 619 414 238
146	8 619 419 316
147	8 619 419 191
148	8 619 434 600
149	8 619 416 613
150	8 619 520 539
151	8 619 419 334
152	8 619 419 335
153	8 619 419 172
154	8 619 419 173
155	8 619 419 407
156	8 619 419 336
157	8 619 419 904
158	8 619 419 147
159	8 619 419 903
160	8 619 419 174
161	8 619 419 500
162	8 619 419 501

ET-Liste zur Explo Nr. 3
Spare Parts List to Explo No. 3

Lfd. Nr. Item No.	Bestell-Nr. Part No.
201	8 619 416 127
202	8 619 530 464
217	8 619 530 669
218	8 619 414 242
219	8 619 580 225
221	8 619 520 225
229	8 619 419 305
230	8 619 419 613
231	8 619 417 222
232	8 619 417 223
233	8 619 419 614
234	8 619 414 244
235	8 619 520 540
236	8 619 316 623
240	8 619 416 128

ET-Liste zur IR-Fernbedienung
Spare Parts List to IR remote controller

Batteriefachdeckel für IR-Fernbedienung
8 619 530 679
Für die Fernbedienung sind keine
weiteren Ersatzteile lieferbar

Battery cover for IR-remote controller
8 619 530 679
Further spare parts for remote
controller are not available

ET-Liste zur Explo Nr. 4
Spare Parts List to Explo No. 4

Lfd. Nr. Item No.	Bestell-Nr. Part No.
300	8 619 580 241
301	8 619 319 505
302	8 619 520 541
307	8 619 520 542
308	8 619 520 543
309	8 619 520 467
310	8 619 520 466
312	8 619 418 601
313	8 619 590 560
325	8 619 520 545
331	8 619 520 546
333	8 619 520 547
334	8 619 520 548
338	8 619 510 980
340	8 619 520 479
344	8 619 520 544

Werkstatt-Hilfsmittel
Jigs and Tools

Y 1	Sicherungsring	8 619 498 001
Y 2	Cass.-Laufwerk	8 619 498 002
Y 3	Post Adjustment	8 619 497 806
Y 4	Reel Tab.	8 619 497 807
Y 5	H-Position Adjustment	8 619 498 003
Y 6	Post Adjustment	8 619 498 004
Y 7	Videoband	8 619 498 005
Y 8	Hexagonal Wrench	8 619 497 811
Y 9	Videotape Adjustment	8 619 498 006
Y 10	Videotape Adjustment	8 619 498 007
Y 11	UpperCylinder Remove	8 619 498 008

Ersatzteilliste

Spare Parts List

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
	Wichtige mechanische Bauteile **Important mechanical Parts**	
1	Kopftrommel DD cylinder unit	8 619 530 638
2	Kopfscheibe Upper cylinder unit	8 619 530 639
3	Capstan Rotor Capstan rotor unit	8 619 510 349
4	Capstan Stator Capstan stator unit	8 619 429 405
5	Tuner Tuner	8 619 530 418
6	HF-Konverter RF converter	8 619 580 029
7	Netzeingangsbuchse AC Jack	8 619 427 649
8	Netzkabel Power cable	8 619 496 701
9	Antennenkabel RF cable	8 619 580 592
10	NF-Kabel Audio cable	8 619 396 700
11	IR-Fernbedienung IR remote control unit	8 619 590 844
12	Programmiertabelle Programming sheet	8 619 590 010

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
	Hauptplatine **Main C.B.A.**	
1	Buchsenabdeckung (ANT) Rear jack cover (ANT)	8 619 590 560
2	Buchsenabdeckung (AV) Rear jack cover (AV)	8 619 520 427
3	Folienleiterbahn (P 6005 - P 7501) Flexible C.B. (20 pin)	8 619 520 428
4	Folienleiterbahn (P 6006 - P 7502) Flexible C.B. (18 pin)	8 619 520 429
5	Folienleiterbahn (P 6004 - P 1508) Flexible C.B.	8 619 580 334
▶|		
D 301	1 SS 254	8 945 405 979
D 303	MA 723	8 945 406 015
D 710	MA 3100 L	8 945 405 724
D 801	1 SS 254	8 945 405 979
D 802	1 SS 254	8 945 405 979
D 803	1 SS 254	8 945 405 979
D 805	1 SS 254	8 945 405 979
D 806	1 SS 254	8 945 405 979
D 1005	1 SS 254	8 945 405 979
D 1006	SV 03 YS	8 945 405 858
D 1007	AK 04	8 945 405 929
D 1701	SB 05-05 CP	8 945 406 040
D 1702	MA 4300 H	8 945 421 229
D 1703	MA 185	8 945 405 620
D 2003	1 SS 254	8 945 405 979
D 2503	1 SS 254	8 945 405 979
D 2504	1 SS 254	8 945 405 979
D 2505	1 SS 254	8 945 405 979
D 2506	1 SS 254	8 945 405 979
D 2507	1 SS 254	8 945 405 979
D 2508	1 SS 254	8 945 405 979
D 2509	1 SS 254	8 945 405 979
D 2510	1 SS 254	8 945 405 979
D 2511	AK 04	8 945 405 929
D 2512	MA 723 VT	8 925 405 557
D 2513	1 SS 254	8 945 405 979
D 3003	1 SS 254	8 945 405 979
D 3004	MA 151 WA	8 945 405 330
D 3005	1 SS 254	8 945 405 979
D 3901	MA 4056 M	8 945 405 720
D 3902	1 SS 254	8 945 405 979
D 3903	MA 151 WK	8 945 405 317
D 3904	MA 151 K	8 945 405 226
D 3905	MA 151 K	8 945 405 226
D 4001	MA 151 WK	8 945 405 317
D 4002	1 SS 254	8 945 405 979
D 4003	1 SS 254	8 945 405 979
D 4004	1SS 254	8 945 405 979
D 4501	MA 151 K	8 945 405 226
D 4502	MA 151 K	8 945 405 226
D 4503	MA 151 K	8 945 405 226
D 4504	MA 151 K	8 945 405 226
D 4602	MA 151 K	8 945 405 226
D 6002	MA 723 VT	8 925 405 557
D 6003	MA 723 VT	8 925 405 557
D 6004	MA 723 VT	8 925 405 557

Ersatzteilliste

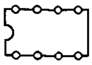
Spare Part List

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
D 6007	ERA 15-01	8 945 405 527
D 6008	AK 04	8 945 405 929
D 6009	1 SS 254	8 945 405 979
D 6010	1 SS 254	8 945 405 979
D 6011	1 SS 254	8 945 405 979
D 6012	1 SS 254	8 945 405 979
D 6012	MA 151 WK	8 945 405 317
D 6101	1 SS 254	8 945 405 979
D 6102	1 SS 254	8 945 405 979
D 6103	1 SS 254	8 945 405 979
D 6104	1 SS 254	8 945 405 979
D 6105	1 SS 254	8 945 405 979
D 6106	1 SS 254	8 945 405 979
D 6107	1 SS 254	8 945 405 979
D 6108	1 SS 254	8 945 405 979
D 6109	1 SS 254	8 945 405 979
D 6110	1 SS 254	8 945 405 979
D 6112	1 SS 254	8 945 405 979
D 6113	SV 03 YS	8 945 405 858
D 6114	SV 03 YS	8 945 405 858
D 7303	MA 28 WA	8 945 405 621
D 7304	MA 3100 L	8 945 405 724
D 7401	MA 723 VT	8 925 405 557
D 7402	1 SS 254	8 945 405 979
D 7406	1 SS 254	8 945 405 979
D 7407	1 SS 254	8 945 405 979
D 7408	MA 151 WK	8 945 405 317
D 7672	MA 3150 H	8 945 406 149
D 7673	MA 3150 H	8 945 406 149
D 7851	1 SS 254	8 945 405 979

Position	Bezeichnung	Bestell-Nr.
DL 801		8 619 580 309
DL 802		8 619 580 315

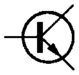
Position	Bezeichnung	Bestell-Nr.
F 1101	1,6 A 250 V	8 619 481 003

Position	Bezeichnung	Bestell-Nr.
FL 3901		8 619 434 039
FL 4501		8 619 510 786



Position	Bezeichnung	Bestell-Nr.
IC 301	MSM 7403 MS	8 945 903 470
IC 302	VEFH 14 D	8 945 903 146
IC 303	UPC 78L 05 J	8 945 902 073
IC 701	M 51366 SP	8 945 901 286
IC 801	M 52352 FP	8 945 903 473
IC 2001	AN 3727 S	8 925 900 769
IC 2002	UPD 358 G 2	8 945 900 886
IC 2501	BA 6435 S	8 945 902 436
IC 2502	UPD 358 G 2	8 945 900 886
IC 2503	SI-3090 CA	8 945 903 334
IC 2504	TPIC 0130 N	8 925 901 113
IC 3901	M 52474 P	8 945 903 471
IC 3902	BA 7004	8 905 956 752
IC 4001	RC 4565 DD	8 945 903 110
IC 4501	BH 7770 KS	8 925 900 866

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
IC 4601	BA 7755 AF	8 925 900 867
IC 4901	LA 7155 M	8 925 901 114
IC 6001	MN 67431 VREG	8 925 901 115
IC 6002	MC 14519 BF	8 945 903 012
IC 6003	BU 5863 F	8 945 903 472
IC 6004	MN 1280 S	8 945 902 705
IC 7301	TDA 3803 A	8 945 901 097
IC 7302	TA 8721 SN	8 945 903 428
IC 7401	M 66006 FP	8 925 900 842
IC 7851	MN 158413 VSSY	8 945 903 013
IC 7852	MN 1280 S	8 945 902 705
IC 7853	SDA 5642	8 945 902 354

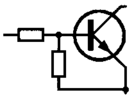


Position	Bezeichnung	Bestell-Nr.
Q 301	MSC 2295 * 2 SC 2295	8 945 706 107
Q 302	MSB 709 * 2 SB 709	8 945 706 104
Q 303	MSC 2295 * 2 SC 2295	8 945 706 107
Q 304	MSB 709 * 2 SB 709	8 945 706 104
Q 703	2 SD 601-S * MSD 601-S	8 925 705 436
Q 712	2 SD 1992	8 945 706 028
Q 771	2 SD 601-S * MSD 601-S	8 925 705 436
Q 801	MSD 601 *2 SD 601	8 945 706 108
Q 802	MSC 2295 *2 SC 2295	8 945 706 107
Q 803	MSD 601 * 2 SD 601	8 945 706 108
Q 804	MSD 601 * 2 SD 601	8 945 706 108
Q 805	MSD 601 * 2 SD 601	8 945 706 108
Q 1001	2 SD 1996-S	8 945 706 078
Q 1701	2 SD 973B -R	8 945 706 180
Q 2001	2 SD 1915	8 945 706 159
Q 2501	2 SB 772	8 905 705 651
Q 3001	2 SB 709	8 925 705 104
Q 3004	2 SD 601	8 925 820 030
Q 3005	2 SD 601	8 925 820 030
Q 3006	2 SC 2295 * MSC 2295	8 945 705 490
Q 3007	MSB 709 * 2 SB 709	8 945 706 104
Q 3008	MSC 2295 * 2 SC 2295	8 945 706 107
Q 3009	2 SC 2295 * MSC 2295	8 945 705 490
Q 3010	MSD 601 * 2 SD 601	8 945 706 108
Q 3014	2 SB 709	8 925 705 104
Q 3015	2 SD 1938	8 925 705 395
Q 3901	MSD 601 * 2 SD 601	8 945 706 108
Q 3902	2 SB 1320	8 945 706 106
Q 3903	MSD 601 * 2 SD 601	8 945 706 108
Q 3904	MSB 709 * 2 SB 709	8 945 706 104
Q 3905	MSD 1328 * 2 SD 1328	8 945 706 110
Q 3906	MSB 709 * 2 SB 709	8 945 706 104
Q 3907	MSD 601 * 2 SD 601	8 945 706 108
Q 4002	MSB 710-R	8 925 705 466
Q 4003	MSB 710-R	8 925 705 466
Q 4004	2 SB 1378	8 925 705 463
Q 4005	MSB 710-R	8 925 705 466
Q 4006	2 SD 602 A	8 945 705 281
Q 4501	2 SD 655 F	8 905 706 023
Q 4551	2 SB 561	8 905 705 384
Q 4601	MSD 1328 * 2 SD 1328	8 945 706 110
Q 5001	MSB 709 * 2 SB 709	8 945 706 104
Q 5002	MSD 601 * 2 SD 601	8 945 706 108
Q 5003	2 SA 1022	8 945 705 892
Q 5005	XN 1501	8 945 705 665
Q 5006	MSB 709 * 2 SB 709	8 945 706 104
Q 5007	MSC 2295 * 2 SC 2295	8 945 706 107
Q 5008	MSB 709 * 2 SB 709	8 945 706 104
Q 5009	MSC 2295 * 2 SC 2295	8 945 706 107

Ersatzteilliste

Spare Parts List

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
Q 5010	MSC 2295 * 2 SC 2295	8 945 706 107
Q 5011	MSC 2295 * 2 SC 2295	8 945 706 107
Q 5012	MSC 2295 * 2 SC 2295	8 945 706 107
Q 5013	MSC 2295 * 2 SC 2295	8 945 706 107
Q 6001	2 SD 655 F	8 905 706 023
Q 6003	2 SD 893	8 945 705 491
Q 6004	2 SD 1994 (S)	8 945 706 015
Q 6005	2 SD 1994 (S)	8 945 706 015
Q 6006	MSD 602	8 925 705 158
Q 6101	MSD 601 * 2 SD 601	8 945 706 108
Q 6102	MSB 709 * 2 SB 709	8 945 706 104
Q 6105	MSD 601 * 2 SD 601	8 945 706 108
Q 7301	2 SD 601	8 925 820 030
Q 7304	MSD 601 * 2 SD 601	8 945 706 108
Q 7305	MSD 601 * 2 SD 601	8 945 706 108
Q 7306	2 SC 2404	8 925 705 095
Q 7307	2 SD 1328	8 925 820 031
Q 7401	2 SB 710	8 925 705 116

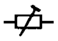


QR 301	DTC 363 EK	8 925 705 138
QR 303	MRN 1404	8 945 706 094
QR 304	MRN 1403	8 945 706 093
QR 305	MRN 1404	8 945 706 094
QR 306	IMH 5	8 925 705 462
QR 701	MRN 1404	8 945 706 094
QR 702	MRN 1404	8 945 706 094
QR 711	MRN 1403	8 945 706 093
QR 712	MRN 1403	8 945 706 093
QR 801	MRN 2404	8 945 706 091
QR 803	MRN 1404	8 945 706 094
QR 805	MRN 1403	8 945 706 093
QR 807	MRN 1403	8 945 706 093
QR 1001	MRN 1402	8 945 706 092
QR 1002	MRN 1402	8 945 706 092
QR 2001	MRN 1404	8 945 706 094
QR 2002	MRN 1404	8 945 706 094
QR 2502	MRN 1403	8 945 706 093
QR 2503	MRN 1403	8 945 706 093
QR 2504	MRN 2404	8 945 706 091
QR 3002	MRN 2402	8 945 706 090
QR 3003	MRN 2402	8 945 706 090
QR 3006	MRN 1403	8 945 706 093
QR 3007	DTC 363 EK	8 925 705 138
QR 3008	DTC 363 EK	8 925 705 138
QR 3010	MRN 1404	8 945 706 094
QR 3902	MRN 1403	8 945 706 093
QR 3903	MRN 1402	8 945 706 092
QR 4001	MRN 1404	8 945 706 094
QR 4002	MRN 1404	8 945 706 094
QR 4003	MRN 1404	8 945 706 094
QR 4004	MRN 1404	8 945 706 094
QR 4005	MRN 1404	8 945 706 094
QR 4006	MRN 1404	8 945 706 094
QR 4007	MRN 1403	8 945 706 093
QR 4010	MRN 1404	8 945 706 094
QR 4012	MRN 1402	8 945 706 092
QR 4013	MRN 1404	8 945 706 094
QR 4014	MRN 1404	8 945 706 094
QR 4508	MRN 2404	8 945 706 091
QR 4509	MRN 2404	8 945 706 091
QR 4510	MRN 1403	8 945 706 093
QR 4602	MRN 2402	8 945 706 090
QR 4603	MRN 1404	8 945 706 094
QR 6001	MRN 2402	8 945 706 090
QR 6002	MRN 2402	8 945 706 090
QR 6003	MRN 1402	8 945 706 092
QR 6004	UN 211 H	8 945 706 178
QR 6005	MRN 2404	8 945 706 091
QR 6006	UN 211 H	8 945 706 178
QR 6007	MRN 2404	8 945 706 091
QR 6008	MRN 2402	8 945 706 090
QR 6009	MRN 1404	8 945 706 094
QR 6010	MRN 1404	8 945 706 094
QR 6101	MRN 1404	8 945 706 094
QR 6102	MRN 1402	8 945 706 092
QR 6103	MRN 1402	8 945 706 092
QR 6104	MRN 1407	8 945 706 105
QR 6105	MRN 1402	8 945 706 092
QR 6106	MRN 1404	8 945 706 094
QR 6107	MRN 2404	8 945 706 091
QR 6108	MRN 1404	8 945 706 094
QR 6109	MRN 2402	8 945 706 090
QR 7301	MRN 1404	8 945 706 094
QR 7302	MRN 1404	8 945 706 094
QR 7312	MRN 1402	8 945 706 092
QR 7313	MRN 1402	8 945 706 092
QR 7314	MRN 1402	8 945 706 092
QR 7315	MRN 1404	8 945 706 094
QR 7316	MRN 1404	8 945 706 094
QR 7401	UN 2217	8 945 705 314
QR 7801	MRN 2402	8 945 706 090
QR 7802	MRN 1404	8 945 706 094
QR 7851	MRN 1402	8 945 706 092
QR 7852	MRN 1404	8 945 706 094

R 6037	22 Ω 3 W	8 940 599 364
R 6040	22 Ω 2 W	8 940 599 263

SW 3901		8 619 428 214

T 703		8 619 435 204
T 704		8 619 439 200
T 1701		8 619 520 435
T 4001		8 619 434 201
T 7301		8 619 336 204
T 7302		8 619 530 221
T 7303		8 619 530 221
T 7304		8 619 434 215
T 7305		8 619 434 214

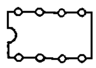


VR 301	1 kΩ	8 921 500 240
VR 701	2 kΩ	8 941 599 777
VR 702	2 kΩ	8 941 599 777
VR 741	10 kΩ	8 941 599 531
VR 801	1 kΩ	8 921 500 240
VR 802	1 kΩ	8 921 500 240
VR 803	10 kΩ	8 941 599 852

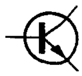
Position Position	Bezeichnung Designation		Bestell-Nr. Part no.
VR 2001	50	kΩ	8 941 599 779
VR 2006	100	kΩ	8 941 599 780
VR 2011	100	kΩ	8 941 599 780
VR 2018	100	kΩ	8 941 599 780
VR 2019	100	kΩ	8 941 599 780
VR 3001	2	kΩ	8 941 599 783
VR 3012	500	Ω	8 941 599 781
VR 3013	500	Ω	8 941 599 781
VR 4001	200	kΩ	8 941 599 782
VR 4501	5	kΩ	8 941 599 854
VR 4502	20	kΩ	8 941 599 855
VR 4507	20	kΩ	8 941 599 855
VR 4509	3,3	kΩ	8 941 599 856
VR 4512	500	Ω	8 941 599 781
VR 4550	6,8	kΩ	8 941 599 857
VR 4551	500	kΩ	8 941 599 858
VR 4552	500	kΩ	8 941 599 858
VR 7301	10	kΩ	8 941 599 852
VR 7326	500	Ω	8 941 599 851
VR 7328	500	Ω	8 941 599 851
VR 7340	10	kΩ	8 941 599 134
VR 7342	5	kΩ	8 941 599 364
VR 7344	10	kΩ	8 941 599 134
VR 8001	2	kΩ	8 941 599 783

Position	Bestell-Nr.
X 710	8 946 193 404
X 711	8 946 193 369
X 716	8 946 193 156
X 717	8 946 193 156
X 801	8 946 193 116
X 3901	8 906 193 051
X 6001	8 946 193 325
X 6002	8 946 193 226
X 6003	8 946 193 178
X 7301	8 946 193 135
X 7302	8 946 193 135
X 7303	8 946 193 136
X 7304	8 946 193 136
X 7305	8 946 193 026
X 7851	8 946 193 277

Kopfverstärker-Platine
Head Amp. C.B.A.



Position	Bezeichnung	Bestell-Nr.
IC 501	AN 3337 NSB	8 945 903 475
IC 502	AN 3370 K	8 945 903 476
IC 551	BA 7743 FS	8 945 903 108



Position	Bezeichnung	Bestell-Nr.
Q 501	MSB 709 * 2 SB 709	8 945 706 104
Q 502	MSD 601 * 2 SD 601	8 945 706 108

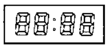
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.

Timerplatine
Timer C.B.A.

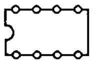
Position	Bezeichnung	Bestell-Nr.
1	IR-Empfänger IR Receiver	8 619 520 537
2	LED-Abstandshalter LED Spacer	8 619 510 182
3	Halter für Anzeige Holder for Display	8 619 510 180

Position	Bezeichnung		Bestell-Nr.
C 7501	30	pF	8 943 995 042

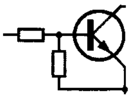
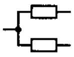
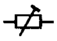
Position	Bezeichnung	Bestell-Nr.
D 7503	MA 73	8 945 405 585
D 7506	MA 73	8 945 405 585
D 7507	MA 73	8 945 405 585
D 7509	MA 73	8 945 405 585
D 7511	MA 73	8 945 405 585
D 7514	MA 73	8 945 405 585
D 7517	MA 73	8 945 405 585
D 7518	MA 73	8 945 405 585
D 7521	MA 73	8 945 405 585
D 7524	MA 73	8 945 405 585
D 7527	MA 73	8 945 405 585
D 7531	MA 73	8 945 405 585
D 7532	MA 73	8 945 405 585
D 7534	MA 73	8 945 405 585
D 7536	MA 73	8 945 405 585
D 7537	MA 73	8 945 405 585
D 7538	1 SS 254	8 945 405 979
D 7539	MA 73	8 945 405 585
D 7540	MA 73	8 945 405 585
D 7541	MA 3068	8 945 406 008
D 7542	MA 73	8 945 405 585
D 7544	LN 28 RCPL	8 945 406 009
D 7545	LN 28 RCPL	8 945 406 009
D 7546	LN 38 GCPL	8 945 406 055
D 7548	LN 28 RCPL	8 945 406 009
D 7549	LN 28 RCPL	8 945 406 009
D 7556	MA 73	8 945 405 585
D 7557	MA 73	8 945 405 585



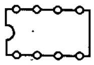
Position	Bestell-Nr.
DP 7501	8 619 580 518

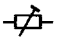


Position	Bezeichnung	Bestell-Nr.
IC 7501	MN 187164 VLGT	8 945 903 477
IC 7502	MN 1280 L	8 945 901 543
IC 7503	MN 1280 S	8 945 902 705
IC 7504	M 34225 V1 AH	8 945 903 474
IC 7505	M 6 M 80021 P	8 945 903 332
IC 7506	BA 6810 F	8 945 903 478

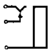
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
		
QR 7501	MRN 1404	8 945 706 094
QR 7503	MRN 2403	8 945 706 103
QR 7504	MRN 2403	8 945 706 103
QR 7505	MRN 2402	8 945 706 090
		
RX 7501		8 940 890 190
RX 7502		8 940 890 206
		
VR 7501	5 kΩ	8 941 599 784
X 7501		8 906 193 053
X 7502		8 946 193 425
X 7503		8 946 193 450

Reglerplatine
VR C.B.A.

1	Blende Panel	8 619 409 050
2	Knopf Knob	8 619 510 019
3	Schiebeknopf Slide button	8 619 580 135
4	LED-Abstandshalter LED Spacer	8 619 510 360
D 6501	LN 21 RCPHL	8 905 405 337
D 6502	1 SS 254	8 945 405 979
D 6503	1 SS 254	8 945 405 979
D 6511	1 SS 254	8 945 405 979
		
IC 6511	VCR 0172	8 945 901 138
SW 6501		8 619 322 210
SW 6502		8 619 520 291
SW 6503		8 619 520 291
SW 6504		8 619 520 291
SW 6505		8 619 520 290
SW 6506		8 619 520 290

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
		
VR 6511		8 941 599 849
VR 6512	20 kΩ	8 921 500 241
VR 6513	2 kΩ	8 941 599 819

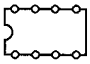
Mikrofon-Buchsenplatine
Mic. Jack C.B.A.

		
J 6302		8 619 520 633
J 6401		8 619 520 632

Jog/Shuttle Platine
Jog/Shuttle C.B.A.

1	Jog/Shuttle Teil Jog/Shuttle Unit	8 619 520 536
D 6702	LN 38 GCPP	8 945 405 162
D 6704	LN 38 GCPP	8 945 405 162
D 6705	LN 38 GCPP	8 945 405 162
SW 6701		8 619 322 210

Netzteilplatine
Power C.B.A.

C 1102	0,1 µF 250 V	8 942 210 511
C 1103	68 µF 400 V	8 943 499 290
D 1102	S1 WBA 60 S	8 945 405 846
D 1103	AP 01 C	8 945 405 930
D 1104	MA 4200 H	8 945 421 476
D 1105	MA 723 VT	8 925 405 557
D 1106	MA 178	8 945 405 619
D 1107	AU 01 Z	8 945 406 372
D 1108	MA 185	8 945 405 620
D 1109	30 DF 2	8 945 406 373
D 1110	31 DQ 04 FC 6	8 945 405 933
		
IC 1101	STRS 6545 LF	8 945 903 429
IC 1102	SI 3120 C	8 945 903 430
IC 1103	UPC 1093 J	8 945 903 431

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
L 1101		8 619 437 033
L 1102		8 619 530 072
L 1103		8 619 530 072
L 1104	100 µH	8 948 411 515
L 1105	100 µH	8 948 411 515
L 1106		8 948 411 516
L 1107		8 619 439 050
L 1111	29 µH	8 619 437 010
Q 1101	PS 2561 L 1-1-M	8 945 903 143
R 1102	68 kΩ 3 W	8 940 599 260
R 1131	2,2 Ω 2 W	8 940 599 567
R 1132	330 kΩ 0,5 W	8 940 599 619
T 1101		8 619 530 237

Kopftrommel-Antriebsplatine
Cylinder Drive C.B.A.

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
IC 2901	AN 3815 K	8 945 902 433
TH 2901		8 940 599 702

Stecker-Anschlußplatine
Mechanism Connection C.B.A.

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
IC 1501	ON 2170	8 945 901 940
IC 1502	ON 2170	8 945 901 940

Löschkopf-Platine
FE Head C.B.A.

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
CR 1401		8 940 890 203

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
Q 1401	2 SD 636	8 905 705 604
T 1401		8 619 434 200

Abwickel-Tr.-Platine
Photo TR. (S) C.B.A.

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
1	Tr.-Halter Photo Tr. Holder	8 619 316 198
Q 1501	PN 150 NV	8 905 406 077

Hinweis:
Handelsübliche Kondensatoren und Widerstände sind in der Ersatzteilliste nicht aufgeführt. Wir bitten Sie, diese Teile im Fachhandel zu beziehen.

Note:
Capacitors and resistors usual in trade are not mentioned in the spare parts list. Kindly buy these parts from the specialized trade.

ORDER NO. VRD9202M108

Service Manual

Video Cassette Recorder

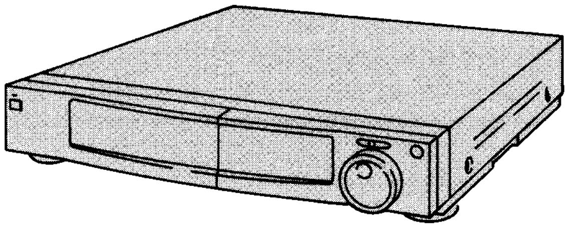
Panasonic VHS

PAL NTSC 4.43

Hi-Fi HQ

NV-F77EG

General Description
Adjustment Procedures
Block / Schematic Diagrams
Exploded Views / Parts List



SPECIFICATIONS

ITEM	SPECIFICATION	
POWER	SOURCE: 220~240V 50/60Hz	
	CONSUMPTION: 34 watts	
RECORDING SYSTEM	2 rotary heads, helical scanning system	
	PAL/NTSC 4.43	
TV TUNER SYSTEM	GERMANY	VHF I: CHE2~CHE4 VHF III: CHS4~CHE12 VHF H: CHS11~CHS20 (PAL/SECAM B) 75Ω unbalanced UHF: CH21~CH69 (PAL/SECAM G) 75Ω unbalanced
	ITALY	VHF I: CHA~CHH VHF III: CHS4~CHH2 VHF H: CHS11~CHS41 (PAL/SECAM B) 75Ω unbalanced UHF: CH21~CH69 (PAL/SECAM G) 75Ω unbalanced
	OTHER COUNTRIES	VHF I: CHE2~CHS3 VHF III: CHM1~CHE12 VHF H: CHU1~CHS41 (PAL/SECAM B) 75Ω unbalanced UHF: CH21~CH69 (PAL/SECAM G) 75Ω unbalanced
RF OUT SYSTEM	UHF: CH36±4 (PAL G) 76^{+2}_{-3}dBμ, 75Ω unbalanced	
VIDEO	HEADS: 4 rotary heads 1 pair for SP recording, playback and trick play (L-R heads) 1 pair for LP recording, playback and trick play (L′-R′ heads)	
	INPUT: VIDEO IN (AV3) Connector (Phono type) 1.0Vp-p, 75Ω terminated EURO AV (AV1/2) Connector (21 pin × 2) 1.0Vp-p, 75Ω unbalanced	

ITEM	SPECIFICATION
VIDEO	OUTPUT: EURO AV (AV1/2) Connector (21 pin × 2) 1.0Vp-p, 75Ω unbalanced
AUDIO	HEAD: 1 Stationary head (Normal Audio) 2 rotary heads (Hi-Fi 2CH)
	INPUT: AUDIO IN (AV3) Connector (Phono type) More than −10dBV (316mV), more than 47kΩ EURO AV (AV1/2) Connector (21 pin × 2) More than −6dBV (500mV) more than 10kΩ MICROPHONE JACK −70dBV
	OUTPUT: AUDIO OUT Connector (Phono type) −8dBV (400mV), Less than 1kΩ EURO AV (AV1/2) Connector (21 pin × 2) −6dBV (500mV), Less than 1kΩ HEADPHONE JACK −30dBV, 8Ω
	TRACK: 1 track (Normal-mono only) 2 channels (Hi-Fi Sound-Stereo)
TAPE FORMAT	VHS Cassette tape (Tape width 12.7mm)
TAPE SPEED	SP: 23.39mm/s LP: 11.695mm/s Record/Playback Time: SP: 4 hours with 240min. type tape LP: 8 hours with 240min. type tape FF/REW Time 2.5min. with 180min. type tape
DIMENSIONS	430(W) × 96(H) × 374(D)mm
WEIGHT	6.0kg
STANDARD ACCESSORIES	1 pc. DIN-RE Cable 1 pc. Infra-red remote controller 2 pc. Audio Cables 1 pc. Programme sheet 1 pc. AC Mains Lead

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.
Section 1 presents you with some general information of features and controls, enabling you to become familiar with each function.
Section 2 contributes to your mechanical and electrical adjustment as well disassembly and replacement procedures.
In the case of very common information relating to other models like mechanical adjustments, please refer to each service manual.
Section 3 contains block diagrams which offers you information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c...
Section 4 contains exploded views and parts list.
Please place orders using the parts list and not the drawing reference numbers.
If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

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SERVICE INFORMATION

1-1. HOW TO CHECK THE CRACKED CHIP PART

(1) Apply heat to the soldered portions of chip part using a soldering iron for about 2–3 seconds.
(2) If the chip part is faulty,it will be broken or cracked.

Caution: Do not leave soldering iron on the PCB too long as damage may occur to the PCB or the chip parts.

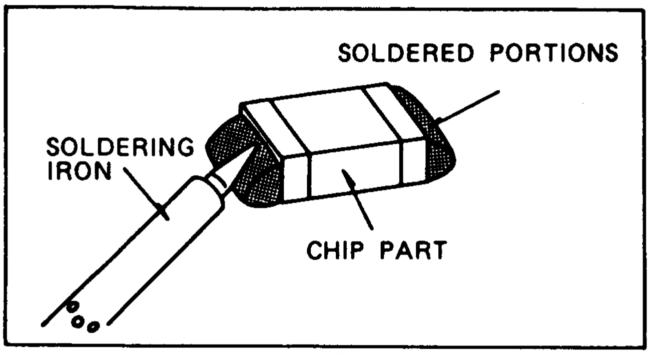

SOLDERED PORTIONS
SOLDERING IRON
CHIP PART

FIG. G1

Note: Regarding intermittent faults
The main causes of these faults are poor soldering and cracked chip parts.

1-2. HOW TO REPLACE THE CHIP PART

1) REMOVAL (RESISTOR, CAPACITOR, etc...)

(1) Presolder the one side of soldering portion for chip part and grasp the chip part by tweezers.

(2) Melt the presoldered portion. And then remove the chip part with a twisting motion while melting the soldering portion of another side quickly.

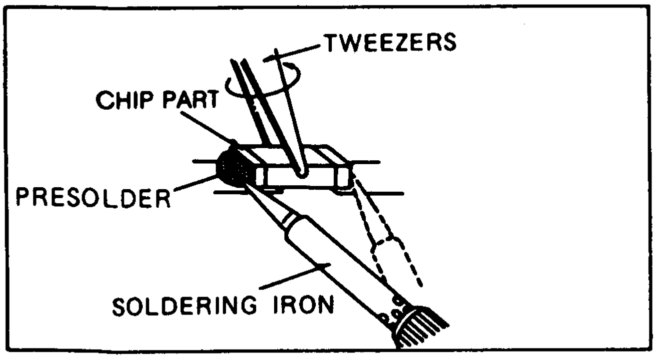

TWEEZERS
CHIP PART
PRESOLDER
SOLDERING IRON

FIG. G2

2) REMOVAL (transistor, diode, etc...)

(1) Grasp the chip part with tweezers and melt the solder of one lead.

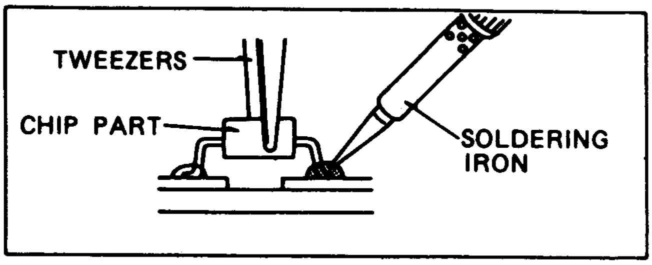

TWEEZERS
CHIP PART
SOLDERING IRON

FIG. G3

(2) Lift the side of that lead upward.

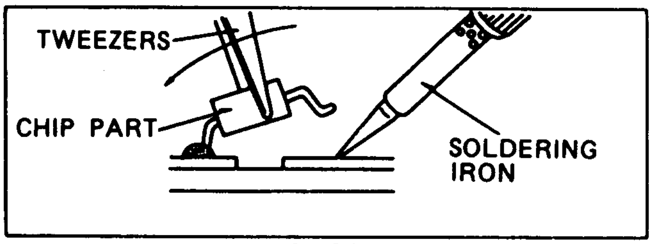

TWEEZERS
CHIP PART
SOLDERING IRON

FIG. G4

Caution: Do not lift the chip part too high as damage may occur to the PCB or the leads that are still soldered on the PCB.

(3) Simultaneously heat the solder of the two remaining leads and lift part to remove.

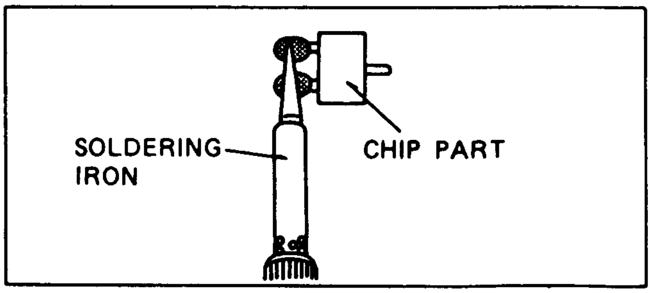

SOLDERING IRON
CHIP PART

FIG. G5

3) INSTALLATION

(1) Presolder the one side of contact point on the circuit board.

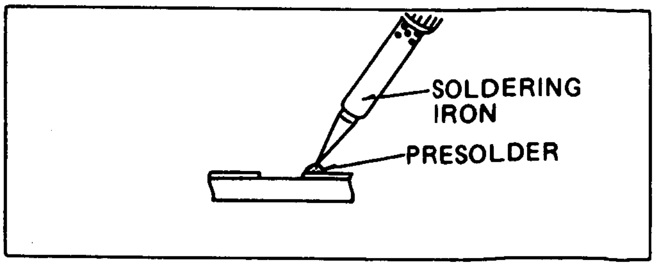

SOLDERING IRON
PRESOLDER

FIG. G6

(2) To install the chip part,hold in position using tweezers, apply heat to the pre-soldered portions using a fine tip soldering iron.
(3) Solder the other side of the chip part.
(4) Check your soldering.

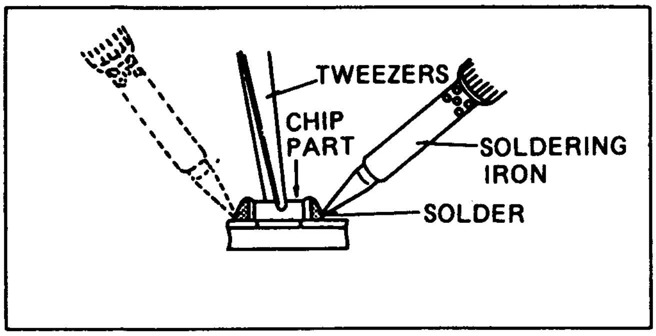

TWEEZERS
CHIP PART
SOLDERING IRON
SOLDER

FIG. G7

1-3. HOW TO REMOVE THE FLAT-IC

(WITH HOT-AIR FLAT-IC DESOLDERING MACHINE)

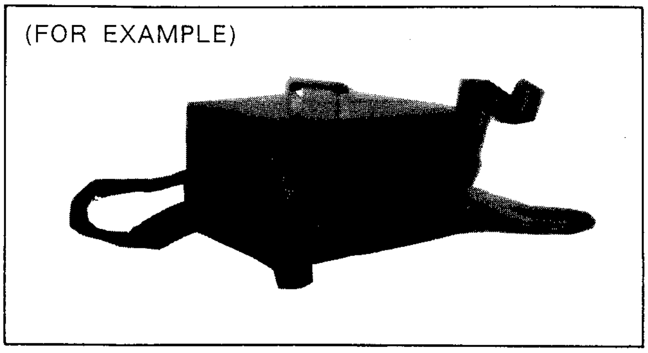

(FOR EXAMPLE)

FIG. G8

(1) Prepare the HOT-AIR FLAT-IC DESOLDERING MACHINE. And then apply hot air to FLAT-IC about 5 ~ 8 seconds.

(2) Remove the FLAT-IC with tweezers while applying the hot air.

Caution: Do not supply the hot air to the chip parts around the Flat-IC for long time as as damage may occur to the chip parts around the Flat -IC.

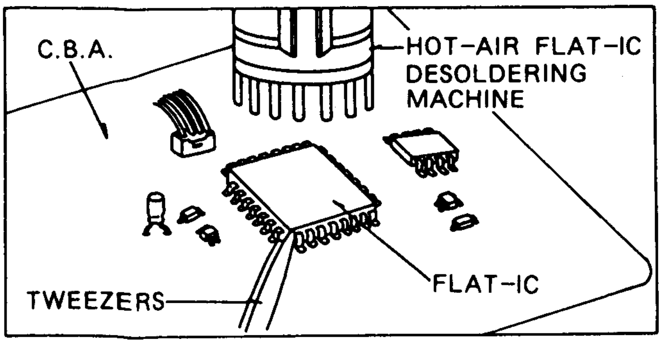

C.B.A.
HOT-AIR FLAT-IC DESOLDERING MACHINE
TWEEZERS
FLAT-IC

FIG. G9

(WITH SOLDERING IRON)

(1) Using solder braid remove the solder from all pins of the Flat-IC.
When you use the solder flux which is applied to all pins of the Flat-IC,you can remove it easily.

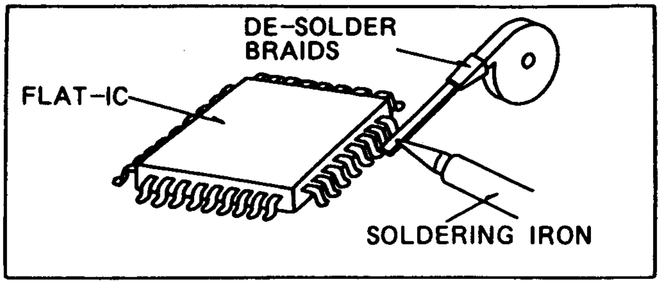

DE-SOLDER BRAIDS
FLAT-IC
SOLDERING IRON

FIG. G10

(2) Lift each lead of the Flat-IC upward one by one using a sharp pin or non solder wire(iron wire),while heating the pins using a fine tip soldering iron or a hot air blower.

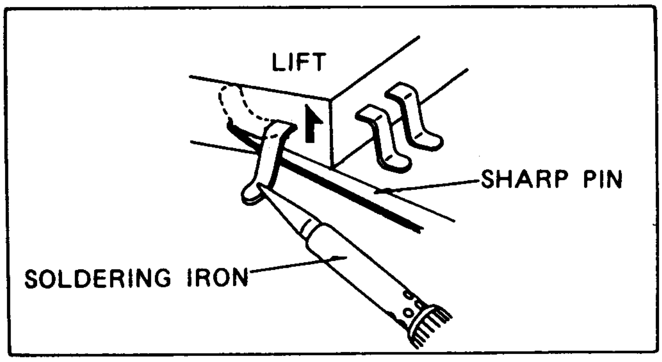

LIFT
SHARP PIN
SOLDERING IRON

FIG. G11

(WITH IRON WIRE)

(1) Affix the wire to workbench or solid mounting point as shown in FIG.G12.
(2) Pull up wire as the solder melts so as to lift the IC lead from the PCB contact pad,while heating the pins using a fine tip soldering iron or hot air blower.

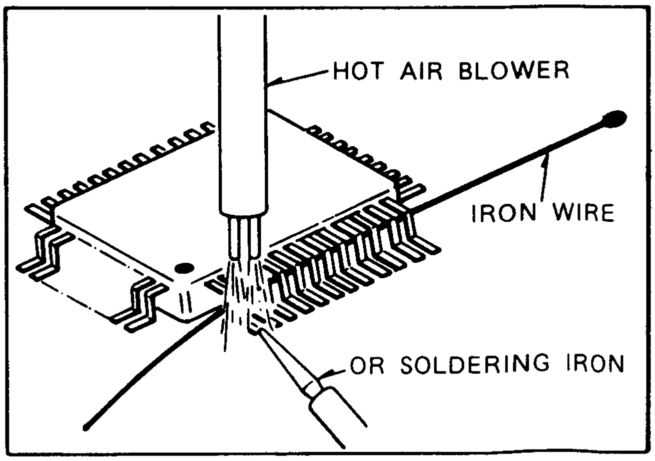

HOT AIR BLOWER
IRON WIRE
OR SOLDERING IRON

FIG.G12

Note: When using a soldering iron care must be taken to ensure that the Flat IC is not being held by glue before it is the PCB may be damaged if force is used.

SECTION 1
GENERAL DESCRIPTIONS

1-1. TECHNICAL INFORMATION

INITIALIZATION OF CHANNEL MEMORY IC (IC7505/M6M80021P)

When replace the channel memory IC (IC7505/M6M80021P), the memory IC should be initialized to keep formal specification.

Note:

1) It should be performed before tuner preset.
2) During initialization or after initialization within 1 second, do not stop the power source. (Do not disconnect AC cord.)
3) Meaning of "INITIALIZATION" is to erase the "SKIP CH". In another to say the number of POSITION CH and DISPLAY CH to be same.

Method:

1) Press the CH UP/DOWN Button so that the Channel indicator indicates "– –".
2) Connect the Diode (MA165) to Pin 54 of IC7501 for Anode, Pin 35 of IC7501 for Cathode twice.
3) Channel indication disappears, and approximately 3 seconds later Channel indicator indicates "1".

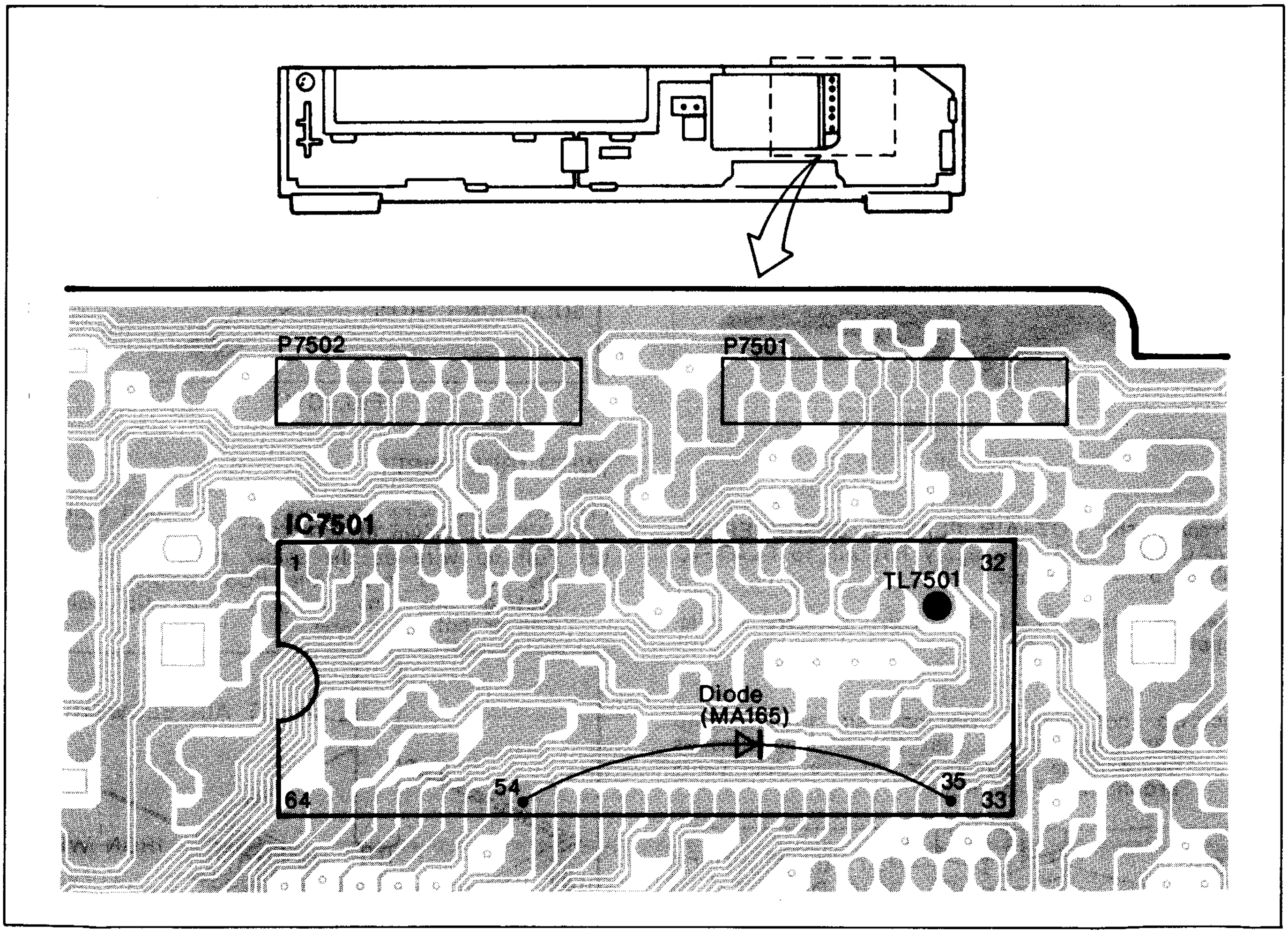


Fig. T1

SERVICE NOTE

When repairing without the top panel unit, Tape Select Switch must be set to the E195 position to prevent the malfunction of the Take-Up Photo Sensor.

SERVICE INFORMATION DISPLAY

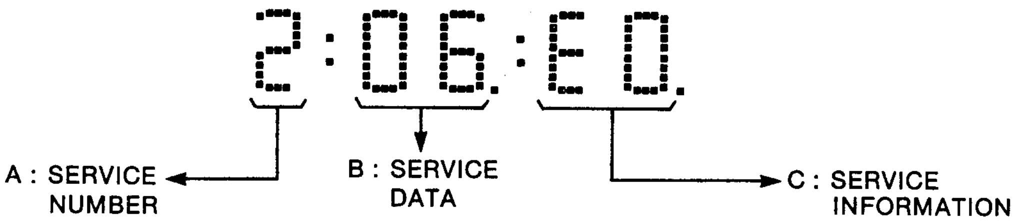
This unit can be confirmed the mode information which is detected by microprocessor IC6001 via multi function display.

Method:

1) Press "EJECT", "FF" and "REW" keys at the same time.
2) The counter of multi function display indicates microprocessor data approximately 1 minutes as shown in Fig.T2.

Note:

1) This mode can be entred even when Power off.
2) Also it can be displayed the data when connect jumper wire between TP6001 and TPGND. (Press "EJECT", "FF" and "REW" keys at the same time, increment service number)



A: SERVICE NUMBER	B: SERVICE DATA	
1	*0 (hex)	can not detect Take-up and Supply Photo
	*9 (hex)	detect Take-up Photo
	*U (hex)	detect Supply Photo
	*3 (hex)	detect Take-up and Supply Photo
2	02 (hex)	EJECT
	03 (hex)	CASSETTE IN
	04 (hex)	CASSETTE DOWN
	06 (hex)	STOP 1
	08 (hex)	STOP 2
	0U (hex)	PLAY
3	L* (hex)	STOP 1 ——→ STOP 2
	4* (hex)	PLAY ——→ CUE/REV
	3* (hex)	STOP 2 ——→ PLAY
	2* (hex)	STOP 1 ——→ FF/REW
	1* (hex)	During Unloading
5	1*** **** (bin)	capstan motor ON
	**** 1*** (bin)	capstan motor reverse direction
6	***1 **** (bin)	cylinder motor ON

C : SERVICE INFORMATION

E0 : Normal
E1 : Cylinder lock (STOP)
E2 : Reel lock (STOP)
E3 : Rev Motor lock
E4 : Mechanism lock during unloading
E5 : Mechanism lock during mode transfer to FF or REW
E6 : Mechanism lock during front unloading (Cassette out)
E9 : Serial data (IC6001 – IC7501) can not be transmitted.

Note:

1. "*" : No meaning
2. "hex": hexadecimal digit
3. "bin" : binary digit

ex.

bin	hex
0000	0
0001	1
⋮	⋮
1010	U
1110	L

Fig. T2

Connections

•Connection to a TV Set with 21 Pin Scart Terminal

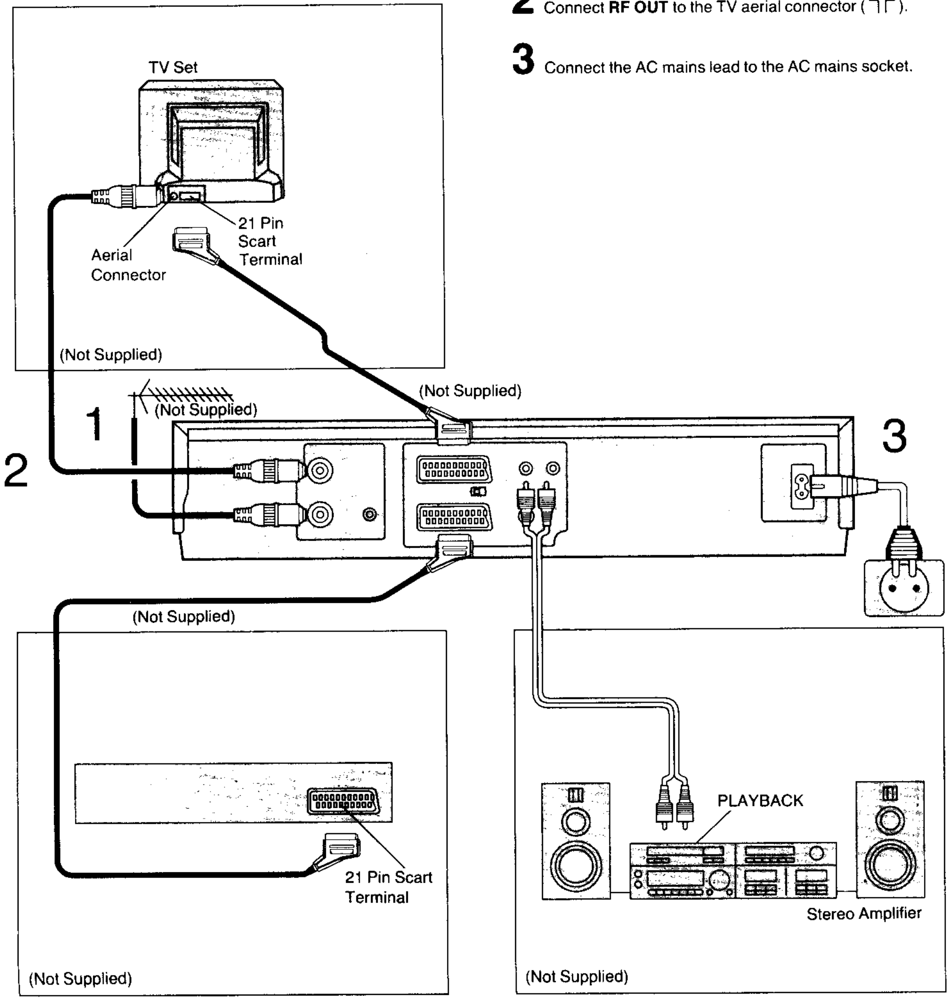
The Scart connection is optional but will be required to playback Hi-Fi stereo sound through a stereo TV. See page 1-8 for more detail.

The following connections are required to record and play back the VTR through a TV set:

1 Connect an external aerial to **RF IN**.

2 Connect **RF OUT** to the TV aerial connector (⌉⌈).

3 Connect the AC mains lead to the AC mains socket.

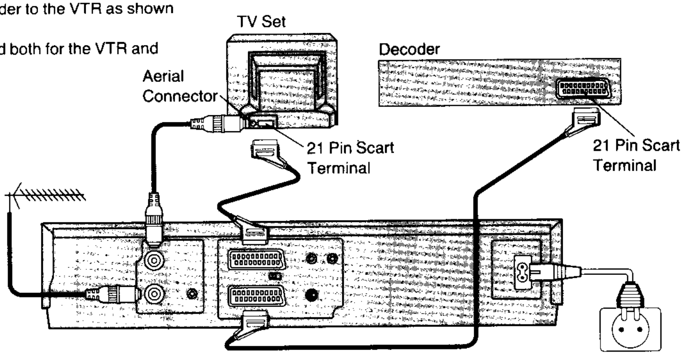

TV Set
Aerial Connector
21 Pin Scart Terminal
(Not Supplied)
(Not Supplied)
1
(Not Supplied)
2
3
(Not Supplied)
21 Pin Scart Terminal
(Not Supplied)
PLAYBACK
Stereo Amplifier
(Not Supplied)

•Connection to a Satellite Receiver, etc.

•Connection to a Stereo Amplifier

•Connection to a pay TV decorder

Connect the TV set decoder to the VTR as shown in the figure.
One decoder can be used both for the VTR and TV.


TV Set
Decoder
Aerial Connector
21 Pin Scart Terminal
21 Pin Scart Terminal

Note:

- If the TV set is provided with an RGB-compatible connector, connect the 21-pin AV cable from the VTR to this connector. Use full-pin 21-pin AV cables for connecting the TV set and VTR and for connecting the VTR and decoder.

AV LINK

With this button the connected colour TV set can be switched from TV to AV operation.
Condition: connection by means of Scart cable, and reaction to switching voltage as for PLAY function.
This makes a variety of functions possible, such as simultaneous recording and viewing when a "Premiere" decoder or a satellite receiver has been connected.

Enjoying sound and pictures from the VTR
VTR mode (VTR indicator lights)

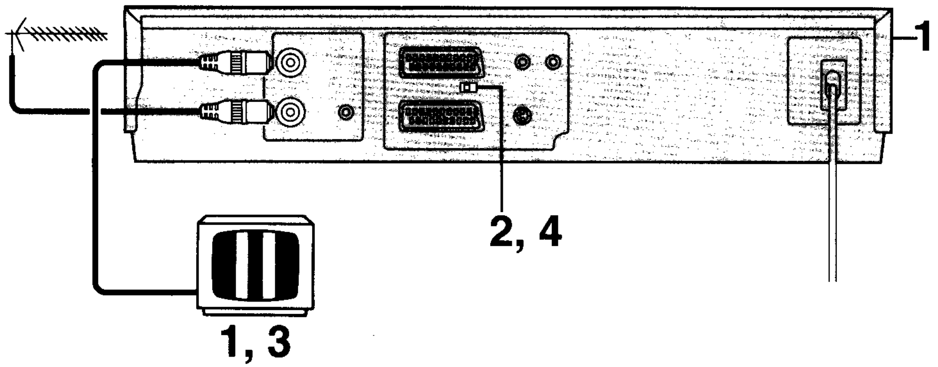
Watching another program on the TV while recording on the VTR
TV mode (VTR indicator goes off)

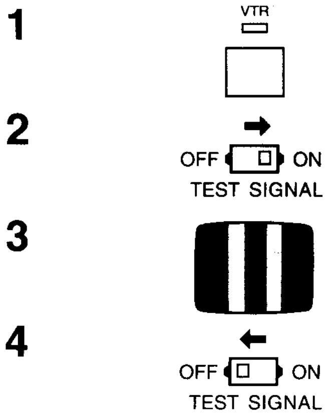
- Select the program to be watched using the TV set's tuner.
- The sound and pictures of a different channel are received by the VTR.

VTR		TV set
Power ON	VTR mode	AV input selected
	TV mode	Input from TV set's tuner*
Power Off	—	Input from TV set's tuner

*When the VTR is set to the TV mode and the VTR to the pay TV (channels 90 to 99) mode, the signals will still be scrambled even when pay TV is selected by the TV set's tuner. At a time like this, either set the VTR to the VTR mode or switch the TV set's input signals to AV input.

Tuning the TV into your VTR





It is possible to view the video picture on your TV in the same way as you watch TV broadcasts.

If you are connecting the video to the TV by the use of the 21 pin scart terminal then you do not need to follow the procedure mentioned below. See page 1-3.

Operations

1 Turn the TV on. The VTR should also be turned on by pressing **VTR** on the front panel of the video.

2 To generate a test pattern, set the **TEST SIGNAL** located on the rear of the video to ON.

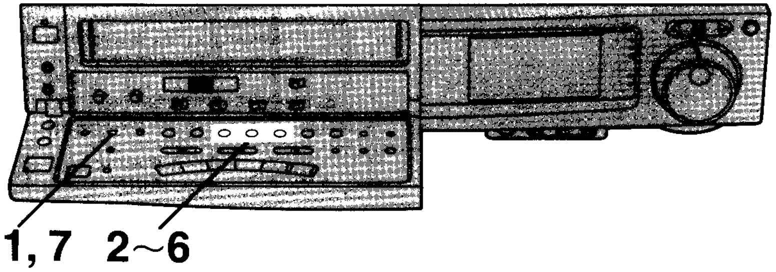
3 Set the TV to a free station number which you wish to use for your video playback i.e. station 5.
Follow the tuning procedure for your TV until you can view the TEST BARS.

4 After tuning the test bars into the TV, set **TEST SIGNAL** to OFF.
Station 5 is now your video channel.

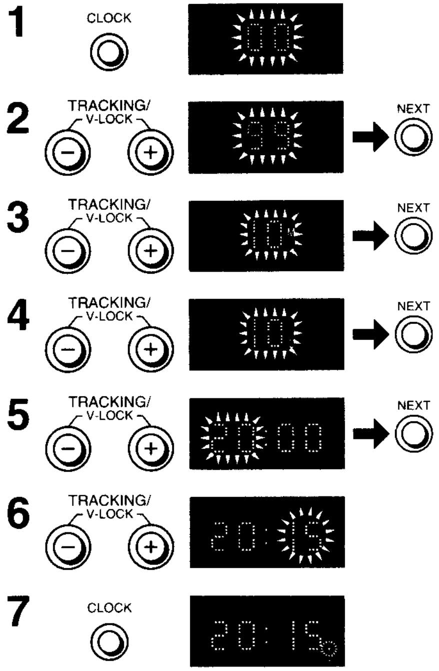
Note:
The TEST signal is transmitted on channel 36 of the broadcasting channels. If you are encountering interference from another broadcast on the video channel, you may readjust to a free channel by using the **CH ADJ.** screw which is located on the rear of the VTR.

Please note that if the **CH ADJ.** screw is used then you will have to return your TV to the TEST signal as in item 2 to 4 above.

Setting the Clock of the VTR



For Example: Set the clock for Sunday, October 10, 1999, 20:15.



In addition to setting the VTR clock from the remote controller, it can also be set directly from the VTR.
The built-in digital clock employs the 24-hour system.

Preparation

Turn ON the VTR.

Operations

1 Press **CLOCK**.

2 Set the year by pressing **TRACKING/V-LOCK** + or −, and then press **NEXT**.

3 Set the month by pressing **TRACKING/V-LOCK** + or −, and then press **NEXT**.

4 Set the date by pressing **TRACKING/V-LOCK** + or −, and then press **NEXT**.

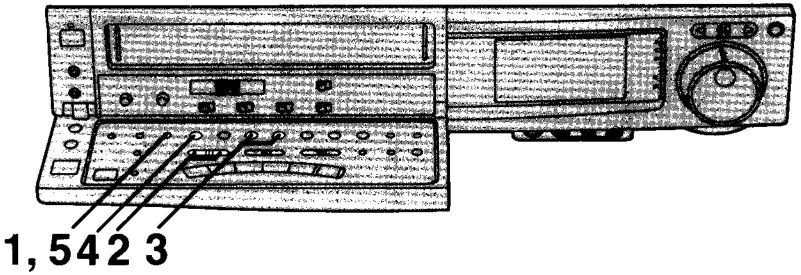
5 Set the hour by pressing **TRACKING/V-LOCK** + or −, and then press **NEXT**.

6 Set the minute by pressing **TRACKING/V-LOCK** + or −.

7 To start the clock from this setting, press **CLOCK**.

Note:
The clock operates for at least 60 minutes, by its back up system in the event of power failure.

Storing TV Broadcasts into your VTR



For example:
Set the programme position.

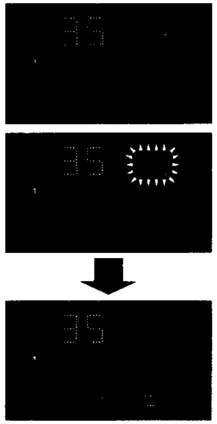
1

PRESET/FINE/NORMAL

2

3

TRACKING/
V-LOCK



4

5

PRESET/FINE/NORMAL

Note:
While tuning, your video may lock onto several weak stations from distant transmitters. Should this occur press **TRACKING/V-LOCK** + or − again until a strong station is received.

Introduction

The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 99 TV broadcast stations.

Preparation

Confirm the TV is on and the VTR viewing channel is selected.

Operations

1 Press the **PRESET/FINE/NORMAL**.

2 Select programme position 35 for tuning by using ∨ ∧.

3 To search for the TV station press **TRACKING/V-LOCK** + or −. If the required TV broadcast is not displayed, again press + or −.

4 Select the broadcasting system for the TV station tuned, by using **PROG/CHECK**.
In the Display, "1" (PAL) or "2" (MESECAM) will be displayed.
- 1 (PAL) .... For receiving PAL system broadcasts
- 2 (MESECAM) ..... For receiving SECAM system broadcasts
The MESECAM Indicator Lamp lights up.

Repeat steps 2–4 for each channel you want to tune to a station.

5 Once all the broadcast stations are memorized into their appropriate station positions, press **PRESET/FINE/NORMAL** once again to set the VTR to normal operative mode.

Fine Tuning Procedure

1 Press **PRESET/FINE/NORMAL** twice.

2 Press **TRACKING/V-LOCK** + or − to obtain the best tuning condition.
- "AFC" Indicator will not be displayed.
- To return the tuning to its former state, press **AFC/VPS**.

3 Press **PRESET/FINE/NORMAL**.

Blanking of Unoccupied Programme Positions

1 Press **PRESET/FINE/NORMAL**.

2 Select a programme position which you do not want to tune to a TV station, by using ∨ ∧.

3 Press **CLEAR** ("– –" will be displayed in the Programme Position Indication).
- Repeat steps 2 and 3 for any programme positions on which no stations are to be tuned. Afterwards, these programme positions will be skipped during Up/Down selection of the programme position.
- To cancel the blanking of a programme position, select that programme position on the VTR and then press **CLEAR**.

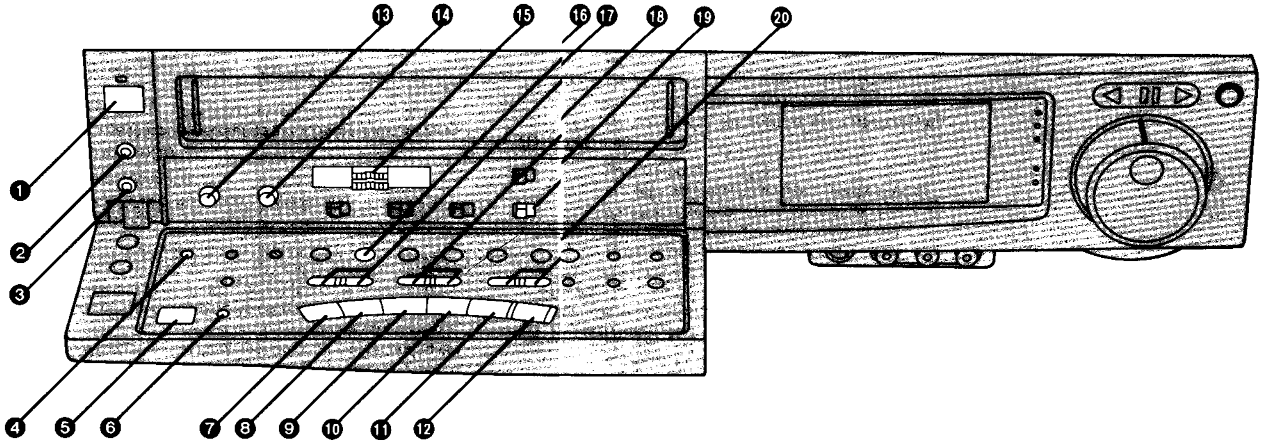
4 Press **PRESET/FINE/NORMAL** twice.

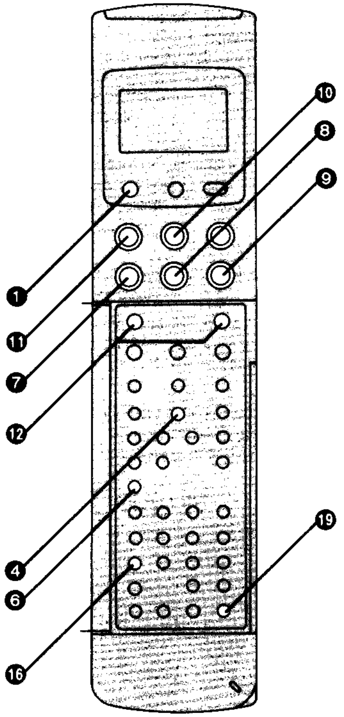
Channel Indication	TV Channel	
	Germany/Italy	Other Countries
2–12	*E2–E12	E2–E12
13–20	A–H (Only Italy)	——
21–69	21–69	21–69
74–76	——	S1–S3
80–82	——	M1–M3
83–89	S4–S10	M4–M10
90–99	S11–S20	U1–U10
121–141	(8 MHz) Hyperband	S21–S41

*In Italy: H1 ..(11), H2...(12)

On the programme positions (channels) 1–89, normal TV stations can be preset.
On the programme positions (channels) 90–99, DBS stations can be preset, such as Pay TV (Premiere).
Descramble operation is possible only for these programm positions.

Controls, Indicators and Connection Sockets





Basic Controls

① **VTR (Video Cassette Recorder On/Off)**
The VTR is turned on and off by pressing this button. The indicator on the button is lit when the VTR is on.

- The VTR is also automatically turned on if a cassette tape is inserted.
- The VTR is also temporarily turned on if EJECT is pressed to eject a cassette tape. In this case, it is automatically turned off afterwards.

② **MIC**
Connect a microphone to this socket for recording. Then, this socket has priority.

③ **PHONES**
For connecting stereo headphones.

④ **AV LINK**
Press this button to select the VTR mode or TV mode for AV LINK.

⑤ **EJECT**
Press this button to eject the cassette tape.

⑥ **AUDIO OUT**
Press this button to select the desired sound tracks. Each press of this button changes the selected sound tracks as follows:
Hi-Fi stereo (L and R)—Hi-Fi mono left (L)—Hi-Fi mono right (R)—Normal (Hi-Fi off)...Hi-Fi Stereo...

⑦ **REW (REWIND)**
Press this button once when the tape is stopped to rapidly rewind it. For short Review playback (during normal playback), keep the button pressed for as long you want the tape to be played back at high speed in reverse direction. For longer Review playback (during normal playback), quickly press the button to start the Review playback "◁◁" is lit.
Hold down the button while the tape is rapidly rewinding to monitor the picture at high speed in the reverse direction.

⑧ **PLAY**
Press this button to start playback. "▷" is lit.

⑨ **FF (FAST FORWARD)**
Press this button once when the tape is stopped to rapidly wind it forward. For short Cue playback (during normal playback), keep the button pressed for as long you want the tape to be played back at high speed in forward direction. For longer Cue playback (during normal playback), quickly press the button to start the Cue playback.
"▷▷" is lit.
Hold down the button while the tape is winding toward to monitor the picture at high speed in the forward direction.

⑩ **STOP**
Press this button to stop any playback or recording.

⑪ **PAUSE/STILL**
Press this button to stop the tape temporarily during playback and recording. Pressing the button again releases the pause.
If pressed during playback, a still picture is shown and "▯▯" is lit.

- If the pause is not released within 5 minutes, the VTR will automatically switch to the STOP mode to protect the tape and the video heads.

⑫ **REC**
Press this button on the VTR to start a recording. The two recording buttons on the remote controller have to be pressed together for the same function. "▷ REC" is lit.

⑬ **PHONES LEVEL**
For adjusting the volume level of connected stereo headphones.

⑭ **PICTURE**
Use this control to adjust the sharpness of the picture. It becomes softer when the control is turned to the left, and sharper when turned to the right.

⑮ **Hi-Fi REC LEVEL**
Use this control for adjusting the recording level to peak at +4 dB on the recording level indicator.

⑯ **RECORDING SP/LP**
Press this button to select the tape speed required for recording.
SP gives the best picture quality.
LP gives the longest recording time.
This needs only to be set for recording since the VTR automatically selects the correct speed for playback.

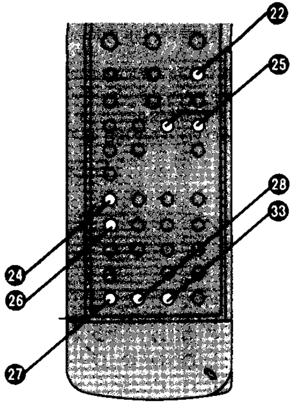
⑰ **∨ ∧**
Press these buttons to select the required TV station. The VTR can handle up to 99 stations.

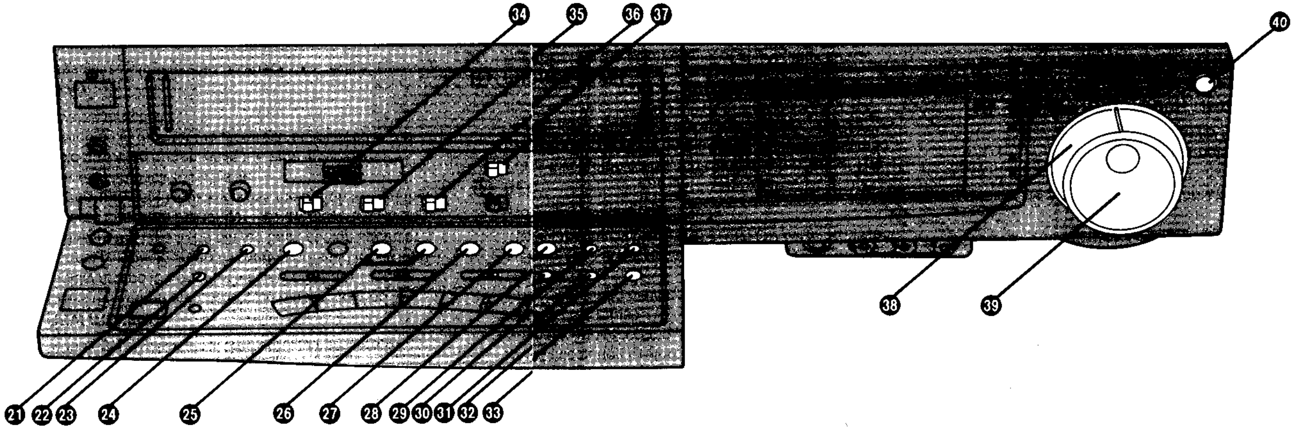
⑱ **OTR ON (ONE-TOUCH TIMER RECORDING)**
Press + or − to set the OTR starting time. "OTR" and "ON" are lit. A single push changes the time in 1-minute steps, and holding down either button changes the time in 10-minute steps.

⑲ **REMOTE MODE (VTR 1/2)**

VTR 1:	Set at this position on both the VTR and remote controller for normal use with one VTR.
VTR 2:	Set at this position when using two Panasonic VTRs. This allows the remote controller to be set for operating VTR 1 or VTR 2.

⑳ **OTR OFF (ONE-TOUCH TIMER RECORDING)**
Press + or − to set the OTR ending time, "OTR" and "OFF" are lit. A single push changes the time in 1-minute steps, and holding down either button changes the time in 10-minute steps. The OTR OFF buttons must be first pressed within 8 seconds after the OTR starting time has been set, otherwise the starting time will be cancelled.





Additional Controls

㉑ **CLOCK**
Press this button to initiate date and time settings. After the time has been entered correctly, this button is pressed again to memorize the setting.

㉒ **RESET**
To reset the tape counter (elapsed time) to "0:00.00".
- The Tape Counter is automatically reset to "0:00.00" when the video cassette is inserted.

㉓ **PRESET/FINE/NORMAL**
Press this button to initiate TV station settings for the tuner.

㉔ **PROG/CHECK (PROG)**
This button is used to select the programme number for timer recording. Number "1, 2, 3... or 8" is lit. The button is also used to display details of a preset timer recording.

㉕ **TRACKING/V-LOCK**
For manual tracking adjustment
The + and − buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.
Manual tracking adjustment is sometimes necessary to reproduce good Hi-Fi sound and picture quality when playing back tapes that have been recorded on another VTR.

For slow tracking adjustment
When noise bars appear during Super Still, Super Still Advance or Super Fine Slow playback, switch over to slow playback and adjust with the "+" or "−" Button to reduce the noise bars.

For vertical locking adjustment
Use the + and − buttons to minimize any vertical jitter during still-picture playback.

For setting the clock and timer recording
(Remote controller: No function)
These buttons are also used for selecting the different time units when setting the clock to the present time, and for setting the data necessary for timer recording.

㉖ **NEXT**
Press this button to memorize preset data and to change to the next variable when setting the clock or timer. At each push, the flashing indication on the date display changes in the order YEAR, MONTH, DATE, HOUR, MINUTE.

㉗ **TIMER REC**
This button used to set the VTR for timer recording. When set for timer recording, "⊡" is lit, and the VTR will turn itself on automatically to begin recording at the preset time, even if it has been turned off by the ON/OFF button.
The VTR can only be operated manually when the timer recording function is off. Timer recording can be set whether the function is on or off, but recording will only be performed when the function is on.
If the timer recording function is on, but no video cassette is inserted or no timer recording has been programmed, the "⊡" will flash to warn that timer recording cannot be performed.

㉘ **CANCEL**
Press this button to cancel the settings made for a timer recording.

㉙ **AUDIO DUB**
Press this button to set up the VTR for audio dubbing.

㉚ **AFC/VPS**
The VPS function for timer recording can be cancelled or activated again.
After performing manual fine tuning of a TV station, resetting to automatic tuning is possible.

㉛ **INSERT**
Press this button to set up the VTR for insert editing.

㉜ **CLEAR**

㉝ **PAL/MESECAM**
This button should be set according to the colour TV system used during recording and playback.
When the MESECAM Indicator is lit, the MESECAM system is selected.

㉞ **NOISE FILTER/EDIT**
OFF: Set at this position for normal use of the VTR.
EDIT: Set at this position for editing operations (of dubbing the tape). The picture sharpness cannot be adjusted in this setting.
NOISE FILTER ON:
Use this setting when playing back tapes with inferior picture quality that could be caused, for example, by repeated dubbing.

㉟ **Hi-FI/NORMAL MIX**
Sound is recorded on both the Hi-Fi and normal sound tracks.
OFF: Normally set at this position to reproduce the better sound available from the Hi-Fi track.
ON: Both sound tracks are played back mixed together. Use this setting when playing back a cassette tape which has been insert edited or audio dubbed.

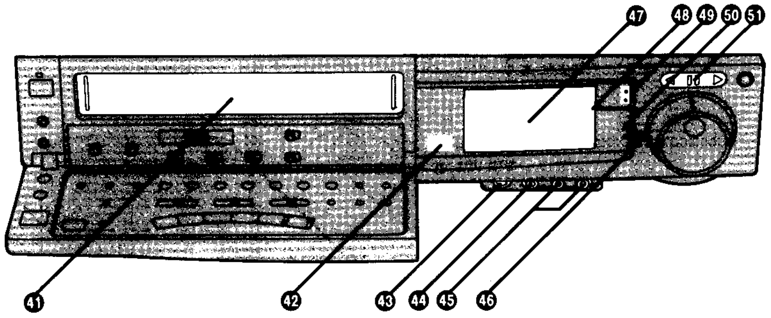
㊱ **NTSC 4.43**
OFF: Normally set at this position, even when playing back NTSC system tapes.
ON: Only set at this position to dub NTSC system tapes.
This setting is needed on both the recording and playback VTR.

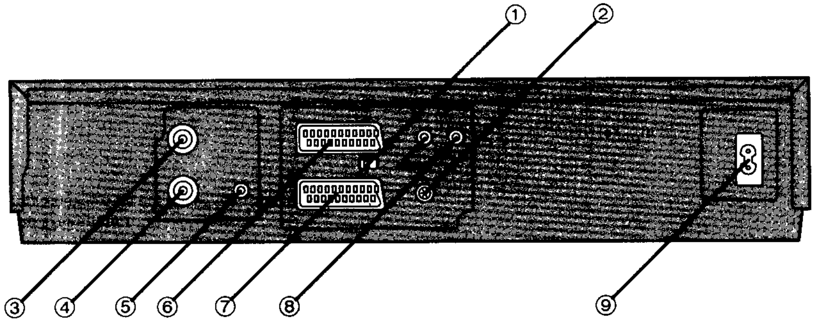
㊲ **TAPE SELECT**
Set this switch according to the cassette tape being used so that the remaining tape time is indicated correctly.
~E195: For -E30, -60, -80, -120, -180 and -195 tapes.
E240: For -E240 tape.
E260: For -E260 tape.

㊳ **Shuttle Ring**
With the Shuttle Ring, the playback speed can be adjusted step by step in both forward and reverse directions.

㊴ **Jog Dial**
The Jog Dial makes it easy to locate any desired frame with utmost precision.

㊵ **Jog/Shuttle**
Press this button to switch over to the jog and the shuttle operation.





㊶ **Cassette Compartment**

㊷ **Infra-red Remote Control Receiver Window**
Receives the signals from the remote controller.

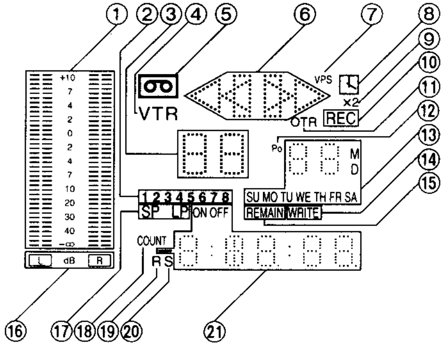
㊸ **SYNC. EDIT**
Connecting to a VHS/VHS-C Movie equipped with Synchro Edit Function.

㊹ **VIDEO IN (AV3)**
For connecting the video cable of a video camera or a second video recorder.

㊺ **AUDIO IN (AV3)**
For connecting the audio cable(s) of a video camera, a hi-fi stereo system or a second video recorder.

㊻ **Audio Dubbing Indicator**

㊼ **Multi-Function Display**



① Audio Level Meter

② Timer Programme Number

③ Channel Display

④ VTR Indicator

⑤ Cassette-in Indicator

⑥ Tape Running Display

⑦ VPS Indicator

⑧ Timer Recording Indicator

⑨ Double Speed Indicator

⑩ Recording Indicator

⑪ OTR Indicator

⑫ Position Indicator

⑬ Date Display

⑭ Write Indicator

⑮ Remaining Tape Time Indicator

⑯ Audio Output Mode Indicators

⑰ Tape Speed Indicator

⑱ Counter Mode Indicator

⑲ Repeat Indicator

⑳ Search Indicator

㉑ Clock/Counter Display

㊽ **MESECAM Indicator**

㊾ **Indicator Lamps for Bilingual and Stereo Reception**
When receiving a TV programme, the type of sound system in which it is broadcast is automatically indicated.

㊿ **Insert Editing Indicator**

(51) **Jog/Shuttle Indicator**
This indicator lights up when the Jog/Shuttle Button is pressed.

Rear Panel

① **TEST SIGNAL**
The test signal is transmitted on channel 36.

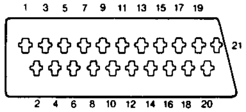
② **EDIT**
By connecting the optional Editing Controller (VW-EC300E/VW-EC310E) to this socket, such editing functions as Assemble Editing, Insert Editing and Audio Dubbing can be performed more quickly and efficiently between two VTRs or between a VTR and a camera recorder.

③ **RF OUT**
Use this to connect to the aerial terminal on a TV set.

④ **RF IN**
Use this to connect an external aerial.

⑤ **CH ADJ.**
Tape playback picture, etc. is viewed on channel 36 but if it is occupied by local station, channel assignment can be adjusted in the range of ±4 ch.

⑥ **AV1**
This 21 pin scart terminal carries input and output signals for both picture and sound. TV sets equipped with a similar socket can be connected here.

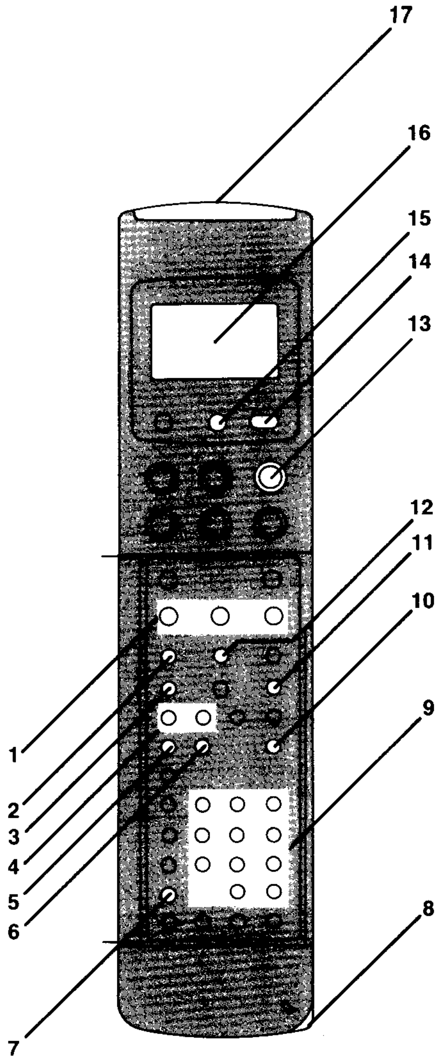


1 AUDIO OUTPUT CH2 (R)
2 AUDIO INPUT CH2 (R)
3 AUDIO OUTPUT CH1 (L)
4 AUDIO GND
5 BLUE GND
6 AUDIO INPUT CH1 (L)
7 BLUE
8 SWITCHING VOLTAGE
9 GREEN GND
10 No connection
11 GREEN
12 No connection
13 RED GND
14 BRANKING GND
15 RED
16 BLANKING
17 VIDEO OUTPUT GND
18 VIDEO INPUT GND
19 VIDEO OUTPUT
20 VIDEO INPUT
21 GND

⑦ **AV2**
This 21 pin scart terminal carries only input signals for both picture and sound.

⑧ **AUDIO OUT**
Use these to connect the sound to a stereo audio system.

⑨ **AC IN~**



Infra-Red Remote Controller

1 SEARCH

Press the Search Button to activate the Search Function, and the VTR changes over to the Still Playback mode.
When the "+" Button is now pressed once, the tape will be played back at 1/30th of normal playback speed. At every further press of the "+" Button, the playback speed will be increased step by step.

- By pressing the "−" Button, the playback speed can be changed in the reverse direction (Still Playback—Reverse Slow Motion Playback—Reverse Playback—Double Speed Reverse Playback--Review Playback).

2 CLOCK/COUNTER

This button is used to switch between the display of the clock and the tape counter.
The numbers on the tape counter only change for recorded segments of the tape.

3 MONITOR

Keep this button depressed during playback to watch TV broadcast.

- When the VTR is connected to the TV set via 21 pin scart cable, this function does not work.

4 INDEX

For the index search function.

5 REPEAT

For the Repeat Playback function.

6 ZERO STOP

For the ZERO STOP function.

7 VPS

The Video Programme System (VPS) is a very convenient system which assures that the TV programmes you have programmed for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time differs from the scheduled time due to delayed start or extension of the programme duration. Also, if a programme is interrupted and, for example, some special news are inserted, the recording will also be interrupted automatically and resumed when the programme continues.

8 Bar Code Reading Section

After the Bar Code Reader is turned on, the tip lights in red.

9 Ten Key

- for selecting the programme positions

MO-SA
9: ⑨▶
SU MO-SA
19: (-/--) → ① → ⑨▶

- for the Timer Search function
- for the Index Search function
- for programming of timer recording

10 TIME SEARCH

For the time search function.

11 INPUT SELECT

Press this button to select the A1~A3 external recording source.
A1: Through the 21 pin AV1 socket.
A2: Through the 21 pin AV2 socket.
A3: Through the Audio Video IN3 sockets. (AV3)

12 TAPE REMAIN

Press this button during playback or recording to have the approximate remaining tape time displayed.
"REMAIN" is lit while the remaining tape time is displayed.

- When using a VHS-C videocassette in this VTR, the remaining tape time indication may not be correct or this indication may not appear at all.

13 STILL ADV

Press this button during still playback. Each time you press this button, the still picture is advanced.

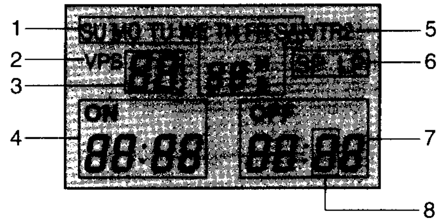
14 TRANSMIT

Press this button to transmit to the VTR data that has been set on the remote controller by either manual means or by bar codes.

15 SCANNER ON/OFF

To turn the Bar Code Reader on and off.

16 Display



1	Date Display	5	Remote Control Mode Indicator
2	VPS Indicator	6	Tape Speed Indicator
3	Programme Position Display	7	End Time Display
4	Start Time Display	8	Check Indicator

17 Infra-red Transmitter

The programming data are transmitted from here to the VTR.

Power source for the remote controller

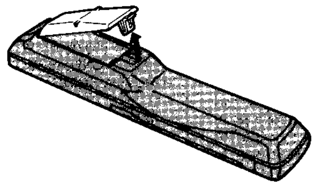
The remote controller is powered by 2 UM3 or R6 size batteries. The life of the batteries is about one year, although this depends on the frequency of use.

Precautions for battery replacement

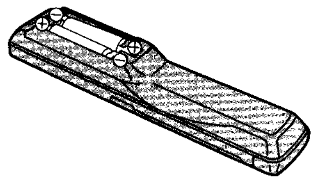
- Load the new batteries with their polarity (+ and −) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

Loading the batteries

Remove the battery compartment lid.

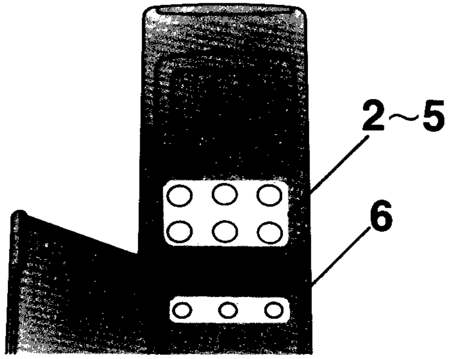


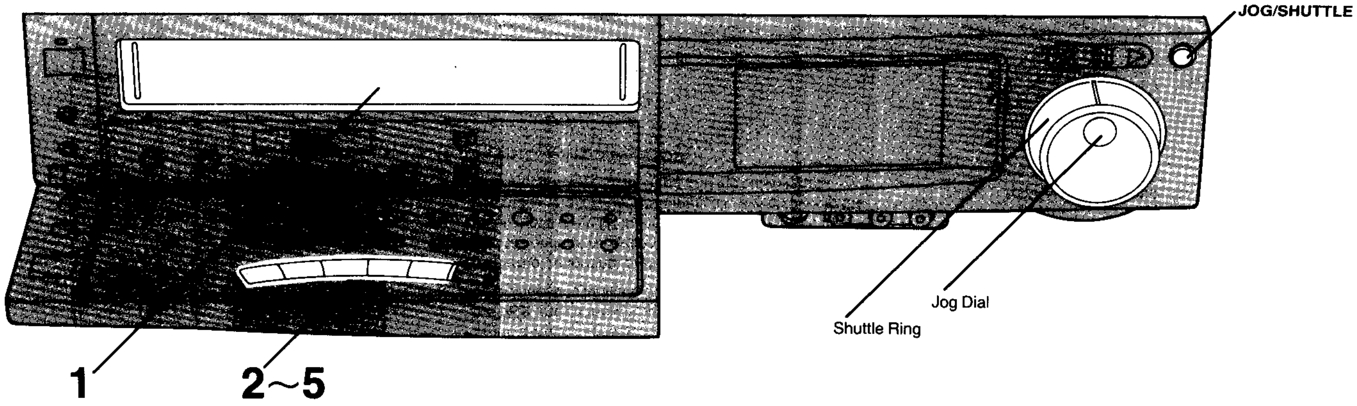
Place the batteries in the battery compartment according to the polarity indicated inside the battery compartment.

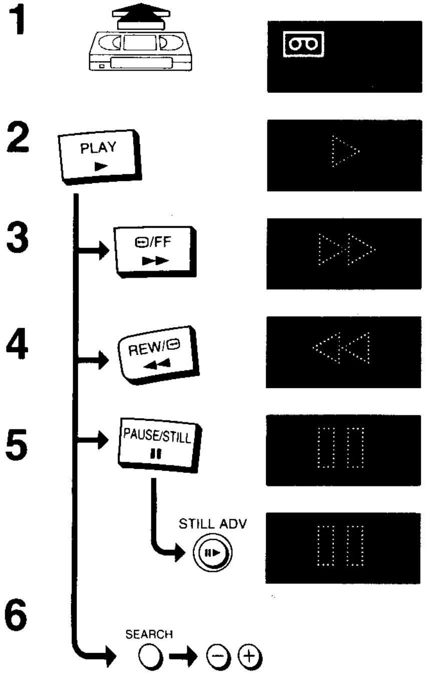


Replace the lid.

Playback







Introduction

The playback controls allow you to view at normal speed, to search for a specific scene with the tape moving faster than normal to freeze into a still picture, to advance this still picture frame by frame, and to view in slow-motion.

Operations

1 Insert a recorded cassette tape.
- If it has already been inserted, press VTR to turn the unit on.
  Turn on the TV and select 21 pin scart terminal input or station number which has been tuned to channel 36 for VTR playback.

2 Start viewing the picture by pressing **PLAY**.

3 To search for a specific scene while viewing the picture, press and hold down **FF** to search ahead.
For longer Cue playback, quickly press the button to start the Cue playback. To change back to normal playback, press **PLAY**.

4 To search for a specific scene while viewing the picture, press and hold down **REW** to search back.
For longer Review playback, quickly press the button to start the Review playback. To change back to normal playback, press **PLAY**.

5 To interrupt playback for a still picture, press **PAUSE/STILL**.
To continue the normal playback, press **PLAY** or this button again.
To advance one frame of the still picture, press **STILL ADV**.

6 To activate the Search Function, press **SEARCH**, and adjust the playback or the reverse playback speed as necessary by pressing + or −.
To change back to normal playback, press **PLAY**.

Jog/Shuttle

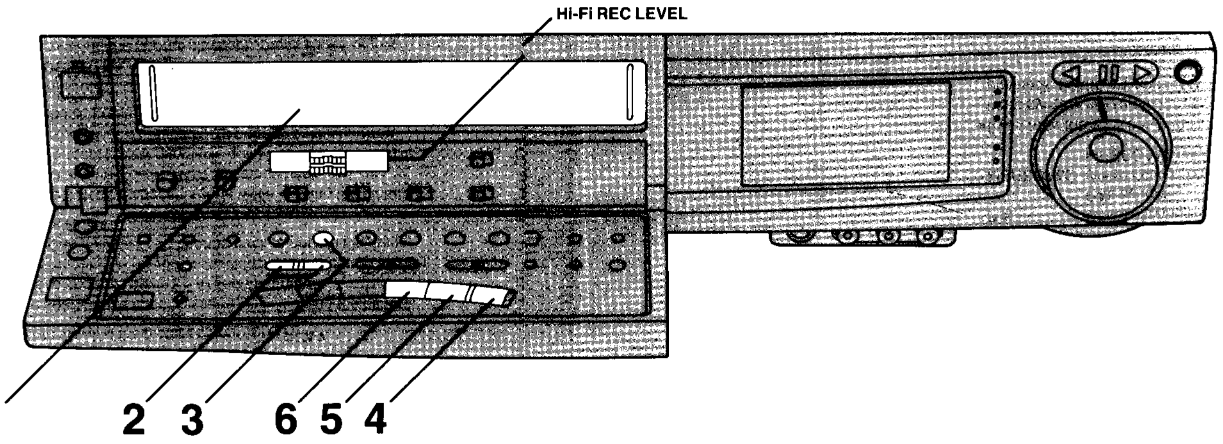
1 During any playback mode, press **JOG/SHUTTLE**, and the VTR drops into still mode.

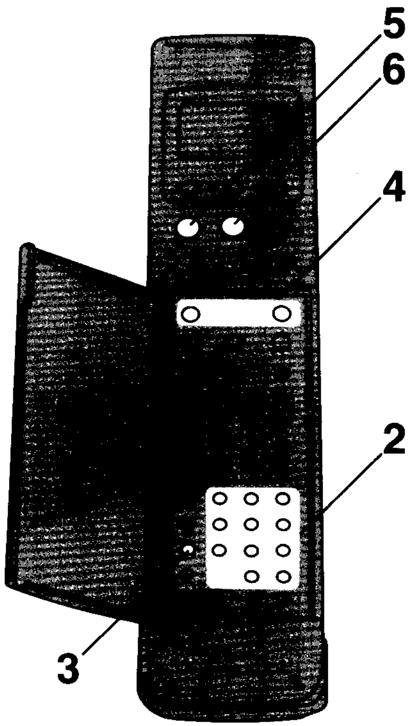
2 Using the Shuttle Ring, select the desired playback speed in both forward and reverse directions.

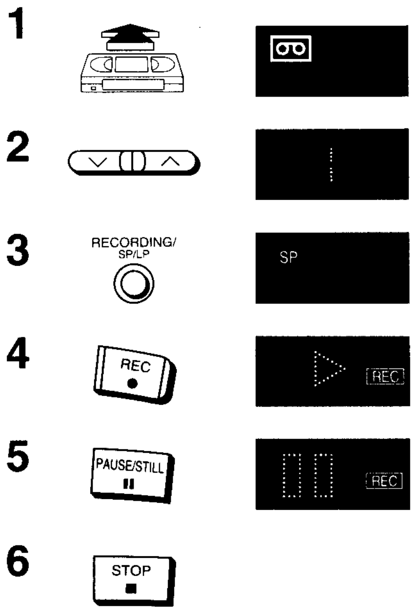
3 Using the Jog Dial, locate the desired picture exactly.

Notes:
- If Cue or Review playback continues for more than 10 minutes, the VTR will automatically switch over to the normal playback mode. If the Still and Slow playback continues for more than 5 minutes, the VTR will automatically switch over to the stop mode.
- In Cue and Review playback, noise bars and distortions can occur on the screen. However, this is not a malfunction.
- The sound will be played back only during normal playback.
- Audio reproduction of linear (conventionally recorded) stereo tapes will be monaural when played back on the FM Hi-Fi video recorders.
- In "LP" mode only:
  1. During any playback mode other than normal playback, the picture may contain some noise bars or vibration, the colour may be unstable or colourless.
  2. When playing back a tape which was recorded on another VTR, it may be necessary to adjust the Tracking Control. In some cases the picture quality may still be inferior. This is due to limitation of format.
- PAL/MESECAM
  During Playback
  PAL: When playing back a tape recorded in the PAL system
  MESECAM: When playing back a tape recorded in the MESECAM system
- Even after the VTR has been set to the stop mode, its head cylinder will rotate for about 20 minutes so that the playback picture will appear promptly on the TV screen.

On-the-spot Recording







Introduction

You can record a TV programme without turning on the TV, and you can record one TV programme while viewing another.

Operations

1 Insert a cassette tape with an intact erasure prevention tab.
   - If it has already been inserted, press **VTR** to turn the unit on.

2 Select the required TV station on the VTR by pressing ∨∧.

3 Select the tape speed SP or LP.

4 Start recording by pressing **REC**.
   - When a video cassette with broken out tab is inserted, the "■" indication will flash, and an alarm sound will be produced to indicate that recording is not possible.

5 To interrupt recording, press **PAUSE/STILL**, and press again to continue recording.
   - If you leave the VTR in the pause mode for more than 5 minutes, the VTR will automatically switch over to the stop mode to protect the tape and the video heads.

6 To stop recording, press **STOP**.

Recording one TV programme while viewing another

1 Use the on-the-spot recording operations.

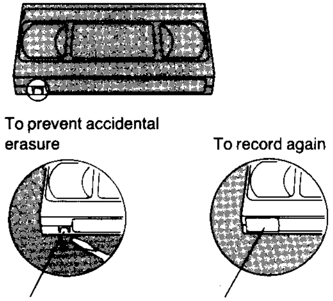
2 Select the TV programme on your TV set you wish to view at the present time on the TV set.

Adjustment of the Hi-Fi Audio Recording Level

Setting the **Hi-Fi REC LEVEL** to the centre "5" position (click stop) assures satisfactory audio recording results in most cases. When using the VTR as a Hi-Fi audio recorder or when producing your own video tapes, it may be desirable to adjust the **Hi-Fi REC LEVEL** to some other position.
(It is recommended to adjust so that peaks in the audio level reach about +4 dB.)

- The sound to be recorded on the "normal" audio track will be adjusted automatically.

Erasure Prevention Tab



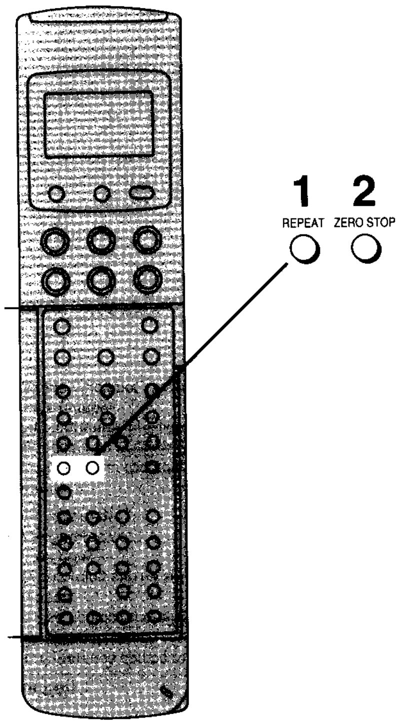
To prevent accidental erasure

To record again

Break off the tab with a screwdriver.

Cover the hole with adhesive tape.

Automatic Features



Introduction

The VTR incorporates a number of automatic features for easy operation.

1 Repeat Playback
To repeat playback from the beginning of tape to the end of the recorded segment, press **REPEAT**.

2 ZERO STOP
To fast forward or rewind to the counter 0:00.00. Press **ZERO STOP**.

Automatic switching on
When a cassette is inserted, the VTR turns itself on automatically.

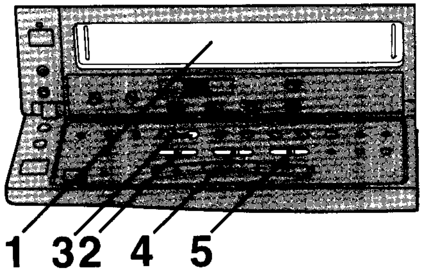
Automatic playback
When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

Automatic rewinding
When the tape reaches its end during recording (except for OTR and timer recording) or playback, it will automatically be rewound to the beginning.

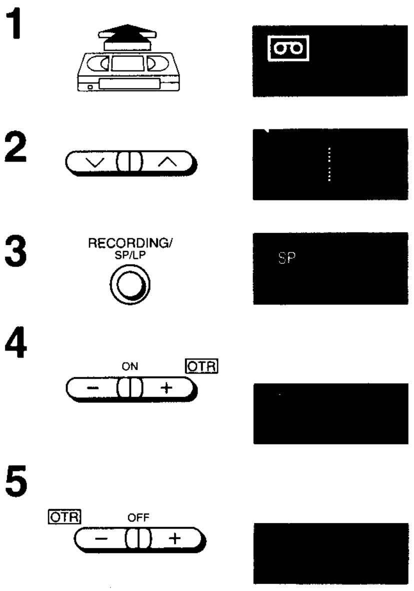
Automatic switching off and ejection
When the VTR is switched off, an inserted cassette can be ejected simply by pressing **EJECT**. The VTR will eject the cassette and automatically turn itself off again.

Automatic head cleaning
This VTR automatically removes tape particles and dust from the video heads to ensure continuously superior picture quality. While the head cleaner is working, some mechanical noise can be heard from the VTR, this not being a malfunction.

One-Touch Timer Recording (OTR)



For example:
OTR recording of a TV Station 1 from 20:02 to 20:30.



Introduction

OTR allows you to quickly set up the VTR to record a single programme starting within the next 24 hours.

Operations

1 Insert a cassette tape with an intact erasure prevention tab.
- If it has already been inserted, press VTR to turn the unit on.

2 Select the required TV station on the VTR by pressing ∨∧.

3 Select the tape speed SP or LP.

4 Set the starting time by pressing **ON**.
- When a video cassette with broken out tab is inserted, the "■" indication will flash, and an alarm sound will be produced to indicate that recording is not possible.
- If you want the recording to start immediately, omit this step.

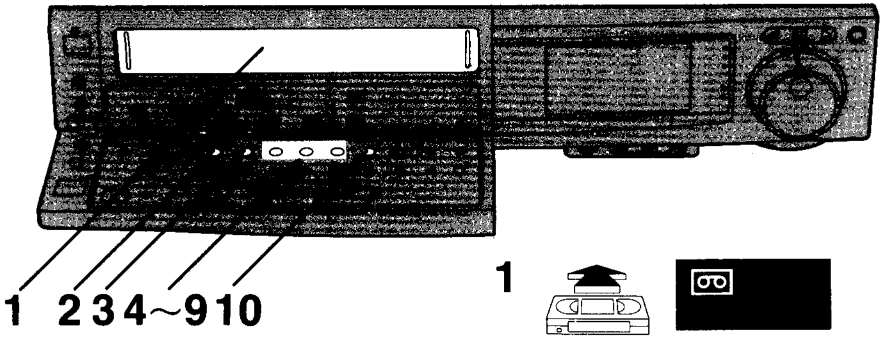
5 Set the ending time by pressing **OFF**.
After 4 seconds, the display will automatically change back to the starting time indication.
- The VTR will automatically switch off, when the OTR is completed. To turn the VTR on again, press **VTR**.

Notes:
- To cancel an OTR setting, press **VTR**.
- It is possible to change the OTR starting time or the ending time before the recording starts.
- It is possible to change the OTR ending time during recording.
- Make sure that the OTR Function (One-Touch Timer Recording) does not overlap a programmed timer recording. An OTR always takes precedence over a timer recording.

To confirm the OTR ending time before the recording starts
Press **PROG/CHECK** once.
When this button is pressed twice, the display will change to the clock indication mode.

To confirm the present time during recording
Press **PROG/CHECK**.

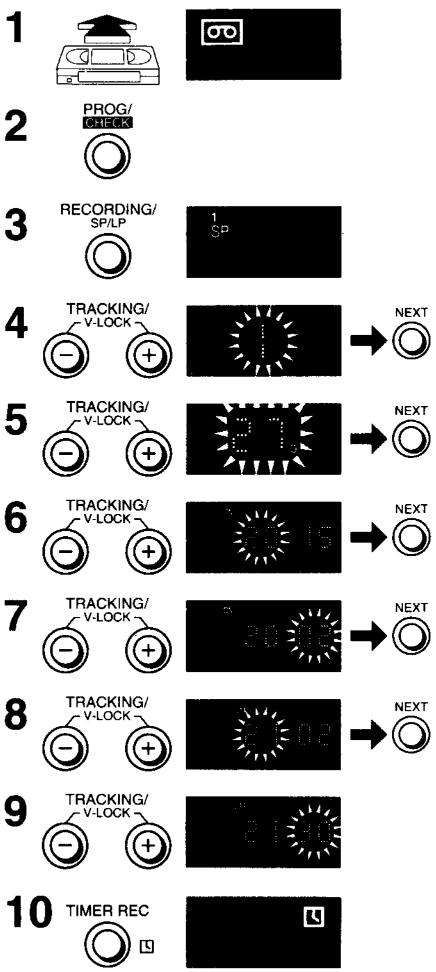
Timer Recording



Introduction

Up to 8 programmes can be recorded over the following month by setting the timer.
This can also handle recording of daily and weekly programmes.
The daily recording can be set according to 3 patterns:
Monday to Friday
Monday to Saturday
Sunday to Saturday

For Example:
Programming a timer recording for a TV programme that will be broadcast on Wednesday, October 27, from 20:02 to 21:30, on programme position (channel) 1, on timer Programme number 1.
(Present date=October 10, 1999)



Operations

1 Insert a cassette tape with an intact erasure prevention tab.
- If it has already inserted, press VTR to turn the unit on.

2 Select the programme number by pressing **PROG/CHECK**.

3 Select the recording speed by pressing **RECORDING SP/LP**.

4 Select the TV station by pressing **TRACKING/V-LOCK** + or – and memorize by pressing **NEXT**.

5 Set the date by pressing **TRACKING/V-LOCK** + or – and memorize by pressing **NEXT**.
- For daily recording, select one of the three different daily patterns by pressing **TRACKING/V-LOCK** + or –.
- For weekly recording, select the day by pressing **TRACKING/V-LOCK** + or –.

6 Set the starting time hour by pressing **TRACKING/V-LOCK** + or – and memorize by pressing **NEXT**.

7 Set the starting time minute by pressing **TRACKING/V-LOCK** + or – and memorize by pressing **NEXT**.

8 Set the ending time hour by pressing **TRACKING/V-LOCK** + or – and memorize by pressing **NEXT**.

9 Set the ending time minute by pressing **TRACKING/V-LOCK** + or –.
- There is no need to press **NEXT**.
- Repeat steps 2 to 9 for the other programmes.

10 Activate timer recording by pressing **TIMER REC**.
- "◷" is displayed and the VTR is set in the standby mode so that it cannot be operated manually.
- If you want to operate the VTR manually, press **TIMER REC**.
  To reactivate the timer press this button again.

Confirming the timer settings

Select the programme number to be checked by pressing **PROG/CHECK**.
The preset channel and start and ending times of the timer recording will be indicated for about 12 seconds.

Cancelling the timer settings

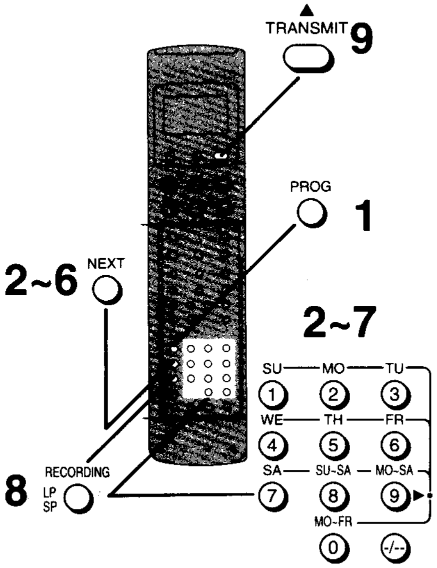
- Release from the standby mode by pressing **TIMER REC**.
- Select the programme number to be cancelled by pressing **PROG/CHECK**.
- Press **CANCEL**.

Turning VPS function On and Off

Press **AFC/VPS** in any of the operation steps 3 to 9.
- If the actual broadcasting times of timer recordings overlap (regardless of whether they are VPS-controlled), the recording that starts first has always priority, and the recording of the later beginning programme will start only after the first timer recording has finished.
- When the VPS signal drops out because the broadcast signal is weak, or when a broadcasting station does not transmit a regular VPS signal, the timer recording will be performed in the normal mode (without VPS) even if it was programmed for VPS.

Note:
If a timer recording is not performed to the end (not enough tape or cancelled by the user), the programmed timer recording data will be cancelled from the memory at 4 a.m. two days later.
However, if the Timer Record Function is activated or an OTR recording is being performed at that time, the programmed timer recording data will be cancelled at 4 a.m. the next day.

Using the Remote Controller



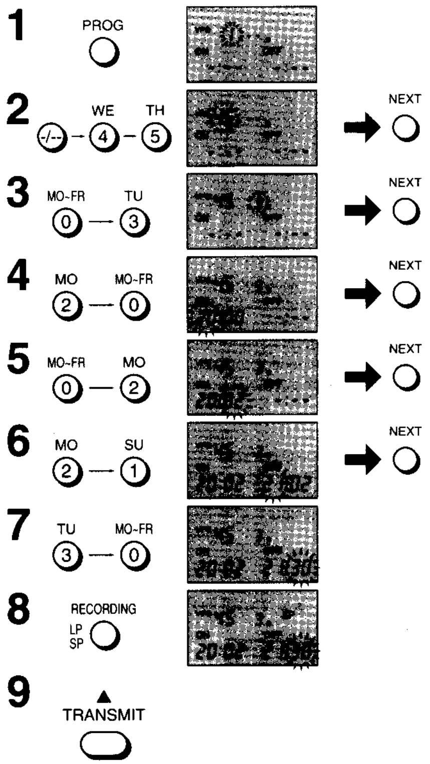
How to select the programme position (channel)
To select a figure between 1 and 9, press the numeric button corresponding to the number.
To select a 2-digit figure, first press the "-/--" button and then press the two corresponding numeric buttons.

How to set the Date and the Starting & Ending Times for Timer Recording
To select a figure between 0 and 9, first press the numeric button "0" and then press the numeric button corresponding to the number.
To select a 2-digit figure, press the two corresponding numeric buttons one after the other.

2 ⓪ — ②
15 ① — ⑤
30 ③ — ⓪

- The second button must be pressed within 5 seconds after the first button.

For Example:
When programming a timer recording for a programme that will be broadcast on channel position 45 on the 3rd of the month, from 20:02 to 21:30.



Note:
If no operation is performed on the Remote Controller for more than 25 seconds, it will automatically switch over to the power-saving standby condition and the indications on the Display will disappear. In this case, the data which have not yet been transmitted to the VTR will be cancelled.

Operations

1 Start programming by pressing **PROG**.
The input field for the programme position on the display of the remote control unit flashes.
2 Enter the programme position and then press **NEXT**.
3 Enter the date and then press **NEXT**.

Timer Recording Every Day at the Same Time
For this timer function, several groups of days can be selected.
Ⓐ Daily recording from Sunday to Saturday
Ⓑ Daily recording from Monday to Saturday
Ⓒ Daily recording from Monday to Friday

Ⓐ MO-SA ⑨ — SU-SA ⑧
Ⓑ MO-SA ⑨ — MO-SA ⑨
Ⓒ MO-SA ⑨ — MO-FR ⓪

Timer Recording on the Same Day Every Week at the Same Time
For Example, SU (Sunday).

MO-SA ⑨ — SU ①

4 Enter the starting time (hour) and then press **NEXT**.
5 Enter the starting time (minute) and then press **NEXT**.
6 Enter the ending time (hour) and then press **NEXT**.
7 Enter the ending time (minutes).
8 Select the desired tape speed ("SP" or "LP") by pressing **RECORDING SP/LP.**
9 Point the Infra-red Transmitter at the VTR Receiver Window and press **TRANSMIT**.
The transmitted data appear on the display and a repeated beep confirms the reception.

Turning VPS function On and Off
Press VPS in any of the operation steps 2 to 9.

VPS ○

Turning Timer On and Off
After programming a timer recording, the Timer Recording Indicator "⊡" lights up and the VTR can no longer be used for recording and playback. To make it possible to use the VTR, turn off **TIMER REC** ("⊡" goes out). To reactivate the timer, press this button again.

TIMER REC ○

Timer Recording from External Picture/Sound Source
If Timer Recording is performed by a unit connected to the 21 pin scart terminals or Audio Video in sockets, press **INPUT SELECT** to select the A1, A2 or A3 indicator for the programme position.
A1: Through the 21 pin AV1 socket.
A2: Through the 21 pin AV2 socket.
A3: Through the Audio Video IN3 sockets. (AV3)

INPUT SELECT ○

Checking of Timer Programming
- The VTR must be turned on.
- Make sure that the display of the Remote Controller is not on. If it is, turn it off with **SCANNER ON/OFF**.

Press **TRANSMIT**.
- If necessary, press **TRANSMIT** several times until the desired timer position is displayed.
- The programmed data will be displayed for about 12 seconds on the display of the VTR. To check the data on the next timer position, press **TRANSMIT** again.

▲ TRANSMIT

Cancelling a Timer Programming
To cancel a programmed timer recording, this data must be displayed on the display of the VTR.

❶ Press **TRANSMIT**.
- If necessary, press **TRANSMIT** several times until the desired timer position is displayed.

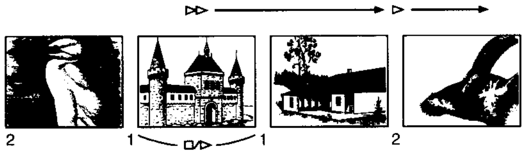
▲ TRANSMIT

❷ Press **CANCEL**.
- The programmed timer recording will be cancelled and dashes "– –" will appear on the display.

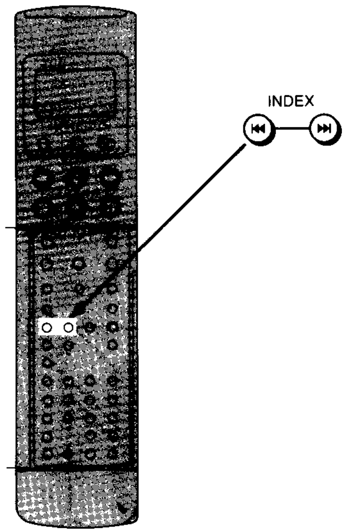
CANCEL ○

Search Function

VHS Index Search System



For example:
Searching for the 2nd recorded segment.



Introduction

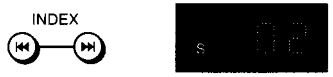
It is very easy to find the beginning of each recording, because a special index signal is recorded at the start of each recorded segment on the tape.
Up to 20 index signals can be searched for in both directions.

Preparation

Set the VTR in the normal playback or stop mode.

Operation

Start to index search and select the 2nd recorded segment by pressing **INDEX ▶▶|** twice.

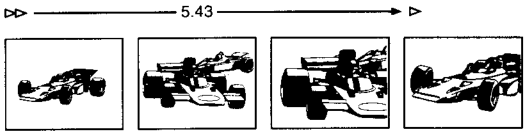


- For reverse direction, press **INDEX |◀◀**.
- After finding the specific recorded segment, playback starts.

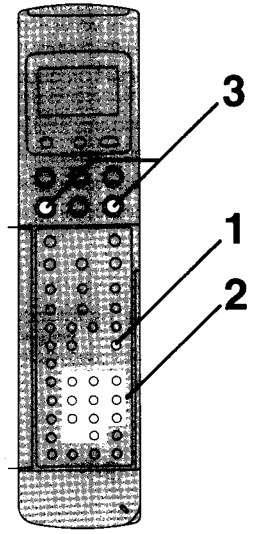
Recording of Index Signals
While recording an index signal, the indication "WRITE" lights up for a few seconds. Index signals will be recorded automatically at the start of recording. It is also possible to record an index signal by pressing **REC** during recording to mark your own reference point.

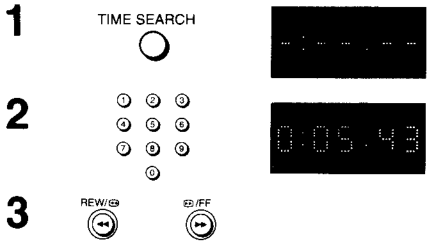
Notes:
- The Search function can only count the addresses correctly, if the index signals are spaced at least 3 minutes in the SP mode and 5 minutes in the LP mode.
- If there are unrecorded parts on the tape, or if recordings have repeatedly been made on the same tape portion, the Search function may not work correctly.

Time Search



For example:
Searching for the recording 5 min. and 43 sec. after the start of playback.





Introduction

It is easy to search forwards or backwards along the tape by a specific amount of playback time to locate a scene or skip programme items of secondary interest.

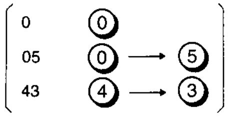
Preparation

Insert a recorded cassette tape and set the VTR in the stop mode.

Operations

1 Set to time search by pressing **TIME SEARCH**.

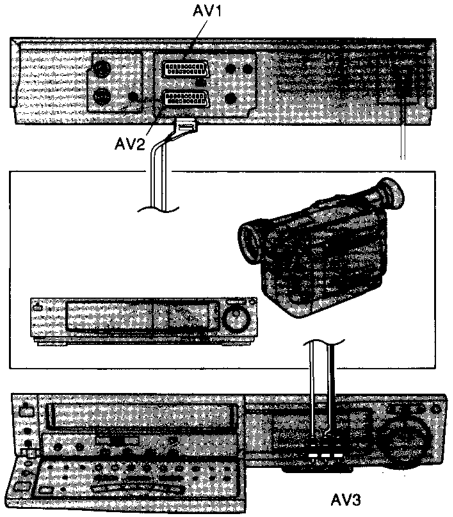
2 Enter the 5 min. and 43 sec. by pressing Ten Key.



3 Start searching by pressing **FF** or **REW**.
The playback starts after rewinding or fast forwarding to the tape position of the designated time.

Editing

Connect a Movie Camera or another VTR to this VTR as shown.



The description here applies when the unit has been connected to AV1. When AV2 or 3 is used, press the INPUT SELECT button to select the respective connection. All other operations are the same as when the connection is made to AV1.

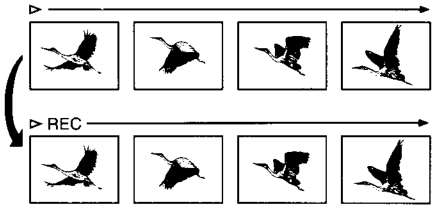
Synchronized Editing between the VTRs
When editing from another VTR equipped with Synchro Edit Socket, synchronized start and stop of both VTRs can be activated from this VTR.

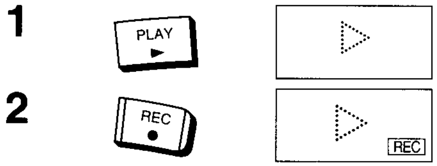
Note:

- Set **NOISE FILTER/EDIT** to OFF for ordinary use of the VTR.
- To copy the NTSC tape, see page 1-18.
- PAL/MESECAM
  During AV Signal Input
  PAL: When receiving PAL signals
  MESECAM: When receiving SECAM signals

Copy Editing

This function is used to make duplicate.





Preparation

Insert the recorded tape in the already connected video source, and a blank tape into this VTR and select AV1 by pressing **INPUT SELECT**.
Set **NOISE FILTER/EDIT** to EDIT.

Operations

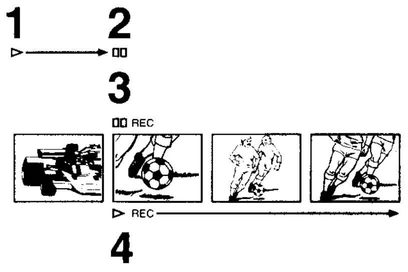
1 Play back the recorded tape on the Video source.

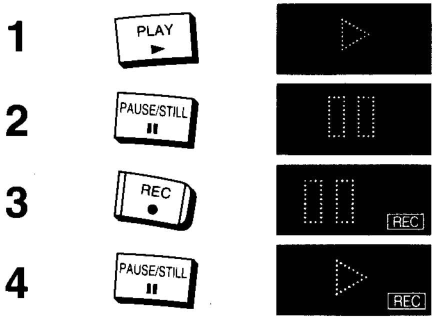
2 Copy the tape by pressing **REC** on this VTR.

Assembly Editing

It can be used to make up an Edited tape from several other recordings or video sources.

A new scene can be added to the end of a previous one, providing a clean edit without noise.





Preparation

Insert a recorded cassette tape with an intact erasure prevention tab, and select the video source required by pressing **INPUT SELECT** to set AV1.
Set **NOISE FILTER/EDIT** to EDIT.

Operations

1 Search for the end of the previously recorded segment by pressing **PLAY**.

2 At the end point, press **PAUSE/STILL**.

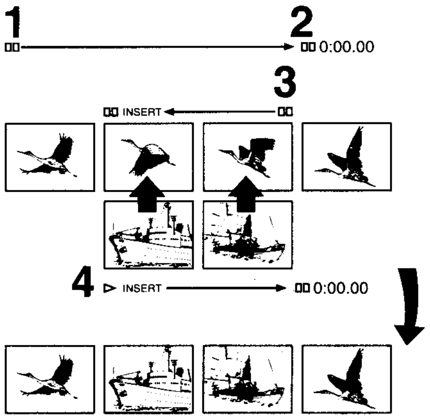
3 Set for the new recording by pressing **REC**.

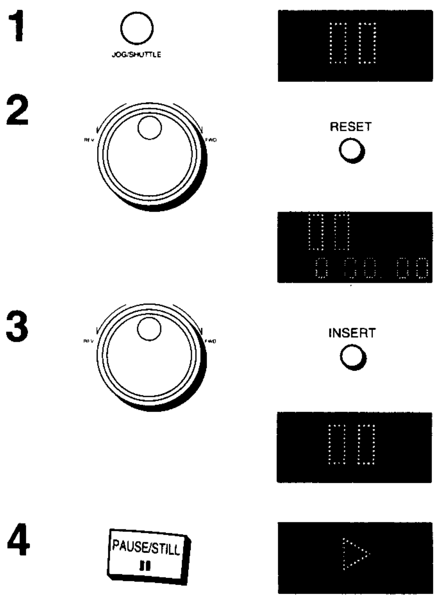
4 Start the new recording by pressing **PAUSE/STILL** again.

Insert Editing

It is used to substitute one scene for another providing a noise free Edit to the picture at both the Edit IN and OUT points.

Insert Editing cannot be used on blank sections of tape. In this case use Assemble Editing first.





Preparation

Insert a recorded cassette with an intact erasure prevention tab, and select the video source required by pressing **INPUT SELECT** to set AV1.
Set **NOISE FILTER/EDIT** to EDIT.

Operations

1 Press **JOG/SHUTTLE**.

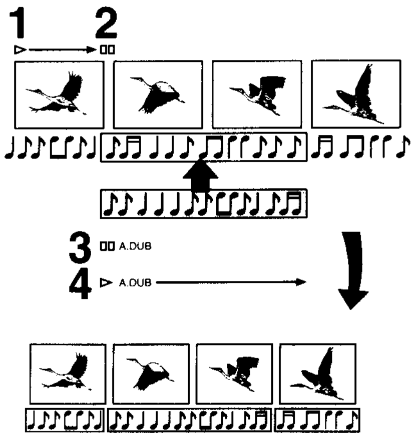
2 Use the Shuttle Ring and the Jog Dial to search for the point where you want the editing to end (end point), and set the counter to 0:00.00 by pressing **RESET**.

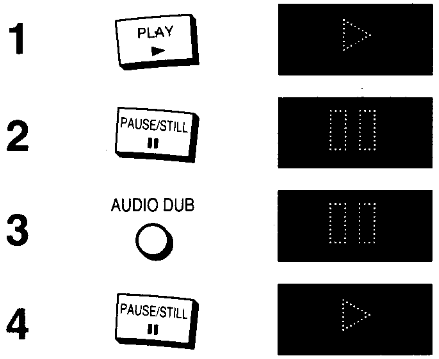
3 Use the Shuttle Ring and the Jog Dial to search for the point where you want the editing to start (start point), and press **INSERT**.
(The Insert Editing Indicator lights up.)
If you want to replace the sound on the "normal" audio track, too, press **AUDIO DUB**.
(The Audio Dubbing indicator lights up.)

4 Start insert editing by pressing **PAUSE/STILL**, and the inserted new recording will stop in the still playback mode when the counter reaches 0:00.00.

Audio Dubbing

It is used to add the back ground music etc.





Preparation

Insert a recorded cassette with an intact erasure prevention tab, and select the audio source required by pressing **INPUT SELECT** to set AV1.

Operations

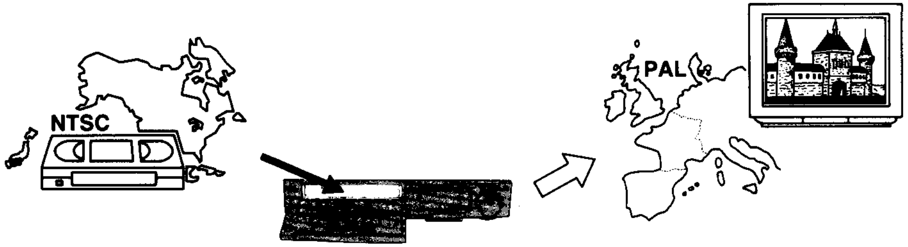
1 Search for the starting point at which you want to record new sound by pressing **PLAY**.

2 At the beginning of the point press **PAUSE/STILL**.

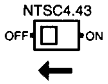
3 Set for audio dubbing by pressing **AUDIO DUB**.
(The Audio Dubbing indicator lights up.)

4 Start recording the new sound by pressing **PAUSE/STILL**.
Stop recording by pressing **STOP**.

Note:
The new sound will be recorded on the normal sound track of the tape, and the original sound will remain on the HiFi sound track. Only monaural sound recording is possible on the normal sound track.
To hear the new sound, select the normal sound track by pressing **AUDIO OUT**.
To hear the new sound and original sound mixed together, set **HI-FI/NORMAL MIX** to ON.



NTSC Playback

1


2

Operations

1 Set **NTSC 4.43** to OFF.

2 Insert the **NTSC** cassette tape and play back by pressing **PLAY**.

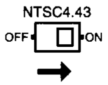
Note:

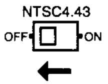
- NTSC is the TV broadcasting system used in U.S.A., Japan, and some other countries.
  PAL is another TV broadcasting system used in Germany and many other parts of the world.
  This VTR will not replay or Record tapes on the SECAM broadcasting system.
  This system is a modified version of the PAL broadcasting system to allow most Europian TV's to reproduce a colour picture when an NTSC tape is replayed on this VTR.
  However due to the system change, the picture may shrink, roll or not reproduce colour on some Televisions.
- During playback of NTSC recordings, the Tape Counter does not function correctly.

NTSC Editing

Connect this to another VTR which has **NTSC 4.43** Switch.

Ensure **NOISE FILTER/EDIT** is set to **EDIT**.

1


2


Operations

1 Set **NTSC 4.43** to ON for both VTRs.
Then, start recording same as page 1-16, 1-17.

2 Set back the **NTSC 4.43** to OFF.

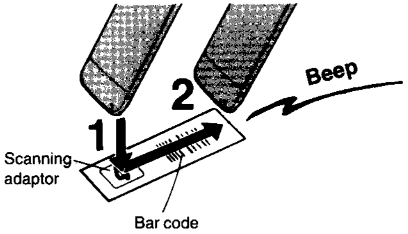
Bar Code Operation

Scanner Preparation

Operating the Remote Controller

This remote controller also operates as a digital-scanning bar code reader.
Press **SCANNER ON/OFF** to turn it on.
If the remote controller is not operated within 25 seconds (within 4 minutes when setting the clock time), it will automatically switch over to the power-saving standby condition and the lamp will go off. (In this condition, if bar codes have already been read but not yet transmitted to the VTR, the data will be cancelled.)
When the lamp is not lit, press **SCANNER ON/OFF** to turn it on again.

Reading the bar codes



1 Fit the remote controller to the scanning adaptor.

2 Trace the bar code quickly in the direction of the arrow, ensuring that you trace it completely past the last bar.
The "Beep" sound indicates that the bar code has been read completely.

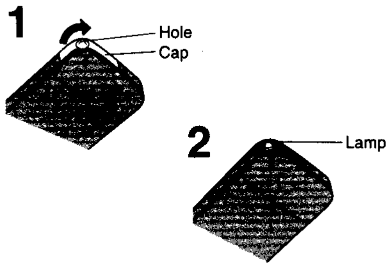
When the Bar Codes Cannot be Read

Although the lamp in the tip of the Bar Code Reading Section lights up:

- No figures appear in the Display
- No beep sounds is heard;

The tip of the Bar Code Reading Section is probably clogged with dirt.

Cleaning



1 Remove the cap of the Bar Code Reading Section.
- Remove dirt and dust from the hole of the cap.

2 Gently wipe the tip of the lamp with a soft cloth.
- Reattach the cap by inserting it until it locks with a click.

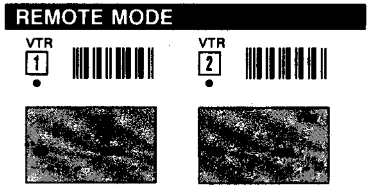
Remote Control Modes

Adjust the remote control mode of the Digital Scanner to the same remote control mode (VTR 1 or VTR 2) as selected on the VTR itself.

When Remote Control Mode "VTR 2" is selected on the VTR

Trace the "VTR 2" bar code on the Programming Sheet.

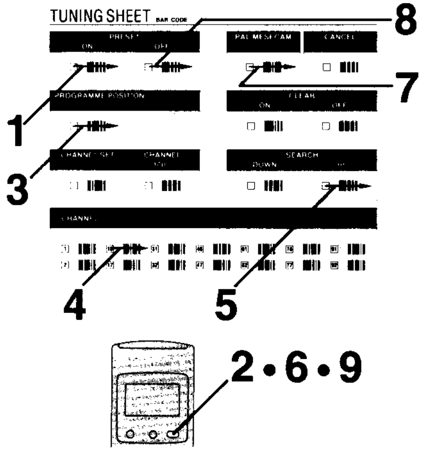
- "VTR 2" will appear in the Bar Code Reader Display.
  When the "VTR 1" bar code is traced, the "VTR 2" indication will disappear and the remote control mode is changed back to "VTR 1".



Note: There is no indication on the display for "VTR 1".

Storing TV Broadcasts

Read in the required data successively by tracing the bar codes.


TUNING SHEET BAR CODE
PRESET
ON
OFF
PAL MESECAM
CANCEL
PROGRAMME POSITION
CLEAR
ON
OFF
CHANNEL SET
CHANNEL 100~
SEARCH
DOWN
UP
CHANNEL
8
7
1
3
4
5
2•6•9

Operations

1 Trace the bar code "PRESET ON".
- If no operations are performed within more than 4 minutes, the Digital Scanner will automatically turn itself off.

2 Press **TRANSMIT** to transmit to the VTR.

3 Trace the bar code "PROGRAMME POSITION".

4 Trace the bar code for the programme position (channel) that you want to tune to a station.

5 Trace the bar code "SEARCH UP" or "SEARCH DOWN".

6 Press **TRANSMIT** to transmit to the VTR.
- The channel will be tuned automatically.
- At every push of the button, the next channel will be tuned.

7 When the Indication in the Multi-Function Display does not show the correct broadcasting system ("1"=PAL; "2"=MESECAM) for the station to be tuned, trace and transmit the bar code PAL/MESECAM to select the correct broadcasting system.

8 Trace the bar code "PRESET OFF".

9 Press **TRANSMIT**.

Notes:
- If you make a mistake in the above operation steps, trace the bar code "CANCEL" and start again from step 4.
- When setting more than 2 channels, repeat the steps 3–7 above.

Setting the Tuner Directly
Perform the operation steps 1–4.

5 Trace the bar code "CHANNEL SET".

6 Trace the number of the channel for the TV station that you want to tune.
- When tuning a TV station in the hyperband, trace the bar code "CHANNEL 100~" and then trace the bar code "CHANNEL".

Press **TRANSMIT** to transmit to the VTR.

Perform the operation steps 7–9.

If you want to tune further TV stations, repeat the steps 3 to 7.

Blanking of Unoccupied Programme Positions
Perform the operation steps 1–3.

4 Trace the bar code for the programme position that you want to blank so that it will be skipped during Up/Down selection of the programme positions.

5 Trace the bar code "CLEAR ON".

6 Press **TRANSMIT** to transmit to the VTR.

7 Trace the bar code "PRESET OFF".

8 Press **TRANSMIT**.

Cancelling the Clear Function (Blanking)
Perform the operation steps 1–3 above.

4 Trace the bar code for the programme position that has been blanked until now.

5 Trace the bar code "CLEAR OFF".

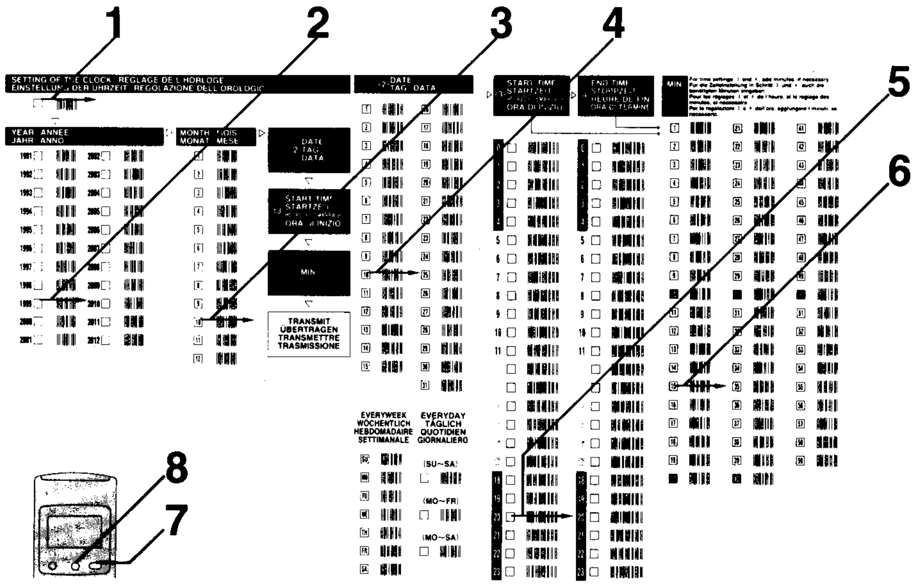
Perform the operation steps 6–8 above.

- To programme a timer recording or the set the clock time immediately after setting the tuner in the VTR by using the Remote Controller, first press **SCANNER ON/OFF** on the Remote Controller to turn it off, before starting the above operation.

Setting the Clock

Read in the following data successively by tracing bar codes 1 to 6 on the programming sheet.

For Example: Set the clock for Sunday, October 10, 1999, 20:15.


1
2
3
4
5
6
8
7
SETTING OF THE CLOCK REGLAGE DE L'HORLOGE
EINSTELLUNG DER UHRZEIT REGOLAZIONE DELL'OROLOGIO
YEAR ANNEE
JAHR ANNO
MONTH MOIS
MONAT MESE
DATE
TAG DATA
START TIME
STARTZEIT
ORA DI INIZIO
MIN
TRANSMIT
ÜBERTRAGEN
TRANSMETTRE
TRASMISSIONE
END TIME
STOPPZEIT
HEURE DE FIN
ORA DI TERMINE
EVERYWEEK
WÖCHENTLICH
HEBDOMADAIRE
SETTIMANALE
EVERYDAY
TÄGLICH
QUOTIDIEN
GIORNALIERO
(SU~SA)
(MO~FR)
(MO~SA)

Preparation

Turn on the VTR and the remote controller.

Operations

1 Trace the bar code SETTING OF THE CLOCK.

2 Trace the bar code for the year (YEAR).

3 Trace the bar code for the month (MONTH).

4 Trace the bar code for the day of the month (DATE).

5 Trace the bar code for the hour (START TIME).
- The repeated beep sound indicates correct bar code reading and readiness for transmitting the data to the VTR.

6 Trace the bar code for the minute (MIN).
- The beep sound will be heard again.

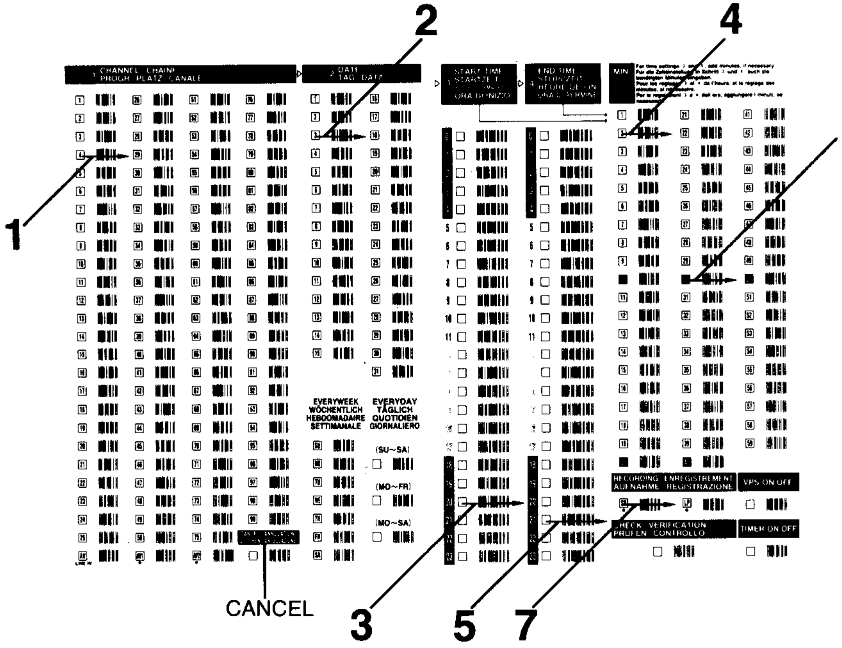
7 To transmit the data to the VTR, point the remote controller at the reception window on the VTR and press **TRANSMIT**.
- The transmitted data appears on the display, and a beep sound confirms proper reception.

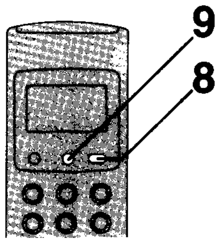
8 To turn off the remote controller, press **ON/OFF** again.
- If the Remote Controller is left with no operation performed for more than 4 minutes, it will automatically switch over to the power-saving standby condition and the lamp in the reading tip goes out. In this case, bar codes that have already been read (but not yet transmitted to the VTR) will be cancelled.

Timer Recording

Setting Timer Recordings from Bar Codes
Successively scan the data for the programme channel, day, starting time and ending time by tracing bar codes 1 to 7 on the programming chart.

For Example:
When programming a timer recording for a programme that will be broadcast on programme position (channel) 4 on the 3rd of the month, from 20:02 to 21:30.





Preparation

Turn on the VTR and the remote controller.

Operations

1 Trace the bar code for CHANNEL.

2 Trace the bar code for DATE.

Timer Recording Every Day at the Same Time
For this timer setting, three day patterns can be selected:

Ⓐ Daily recording from Sunday to Saturday
Ⓑ Daily recording from Monday to Friday
Ⓒ Daily recording from Monday to Saturday

(SU~SA) (MO~FR) (MO~SA)
☐ Ⓐ ☐ Ⓑ ☐ Ⓒ

Timer Recording at the Same Time on the Same Day Every Week
Trace the bar code for the day of the week in the EVERYWEEK column.
For example, SU (Sunday).

EVERYWEEK
WÖCHENTLICH
HEBDOMADAIRE
SETTIMANALE

SU

3 Trace the bar code for START TIME.

4 Trace the bar code for MIN.

5 Trace the bar code for END TIME.
- The repeated beep sound indicates readiness for data transmission to the VTR.

6 Trace the bar code for MIN.
- The beep sound will be heard again.

7 Trace the bar code for RECORDING according to the desired tape speed.
- The beep sound will be heard again.

8 To transmit the data to the VTR, point at the reception window on the VTR and press **TRANSMIT.**
- The transmitted data appears on the display of the VTR and a beep sound confirms proper reception.

Programming a Series Timer Recordings
Trace the CANCEL bar code.
Repeat the required steps 1 to 8 for each timer recording.

9 To turn off the remote controller press **SCANNER ON/OFF.**

Turning the Timer on and off
After programming a timer recording, the timer recording indicator "◷" lights up, and the VTR can no longer be used for normal recording and playback. To make it possible to use the VTR, trace the TIMER ON/OFF bar code and transmit to the VTR (the timer recording indicator "◷" will go out). To reactivate the timer again, trace the TIMER ON/OFF bar code again and transmit to the VTR (the "◷" indicator will light again).

TIMER ON/OFF

Timer Recording from an External Signal Source
If a timer recording is to be made from a signal source that is connected to the 21 pin scart terminal, the "AV" bar code in the CHANNEL column must be traced for the programme.
AV 1: AV1 socket
AV 2: AV2 socket
- AV 3 can not be selected.

AV1

Checking Timer Recording Settings
The VTR must be turned on, or with the timer recording indicator "◷" lit.

1 Trace the CHECK bar code.

2 Transmit the data to the VTR.
- The programmed data will be displayed for about 12 seconds in the display panel.
  To check the settings for the next timer recording, press **TRANSMIT.**

CHECK / VERIFICATION
PRÜFEN / CONTROLLO

Cancelling Timer Recording Data
The data for the timer recording must first be displayed on the panel.

1 Trace the CHECK bar code.

2 Transmit the data to the VTR.

3 Trace the CANCEL bar code.

4 Transmit the data to the VTR.

The programmed timer recording will be cancelled and "– –" dashes will appear on the display panel.

CANCEL ANNULATION
LOSCHEN CANCELLAZIONE

Turning the VPS Function on and off
If the VTR is equipped with the VPS function, the VPS function is automatically activated when the Digital Scanner On/Off Switch is set to ON, or when the CANCEL bar code is traced. To cancel the VPS function, trace the bar code VPS ON/OFF. To activate the VPS function again, trace the bar code VPS ON/OFF again.

VPS ON/OFF

SECTION 2
ADJUSTMENT PROCEDURES

2-1. DISASSEMBLY METHOD

2–1–1. DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps of the cabinet parts and the circuit boards in order to find the necessary items for servicing.
When reassembling, perform the steps in the reverse order.

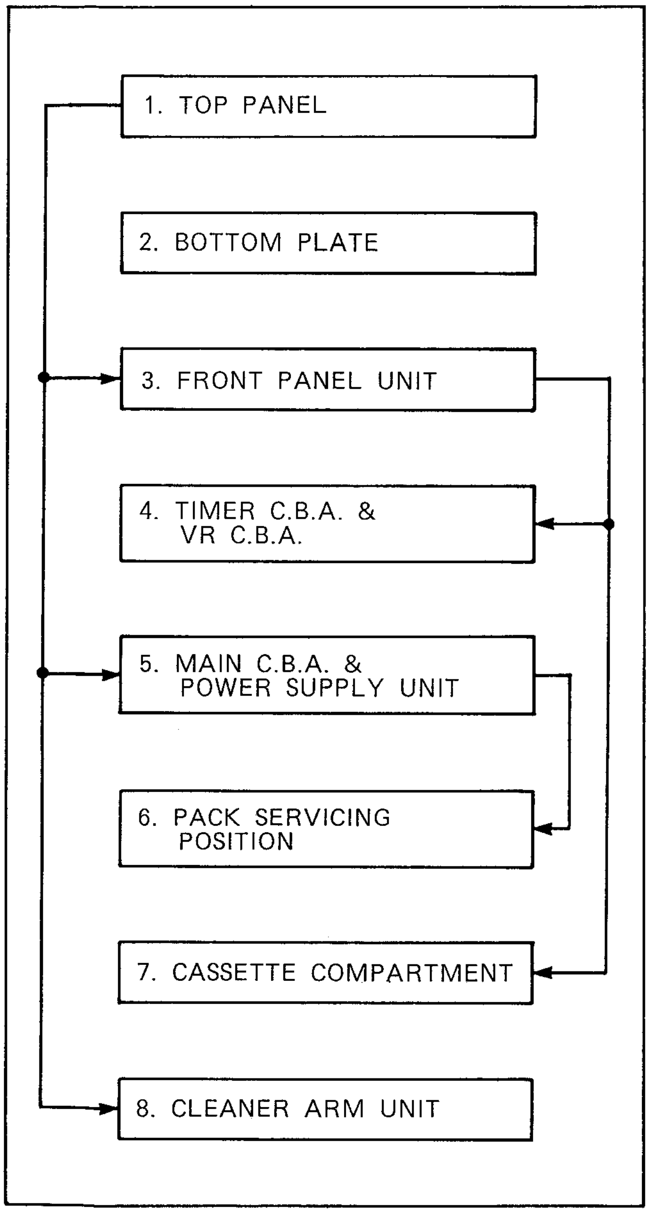

1. TOP PANEL
2. BOTTOM PLATE
3. FRONT PANEL UNIT
4. TIMER C.B.A. & VR C.B.A.
5. MAIN C.B.A. & POWER SUPPLY UNIT
6. PACK SERVICING POSITION
7. CASSETTE COMPARTMENT
8. CLEANER ARM UNIT

Fig. D1

2–1–2. DETAIL DISASSEMBLY METHOD

1. REMOVAL OF THE TOP PANEL

Remove...4 Screws(A)

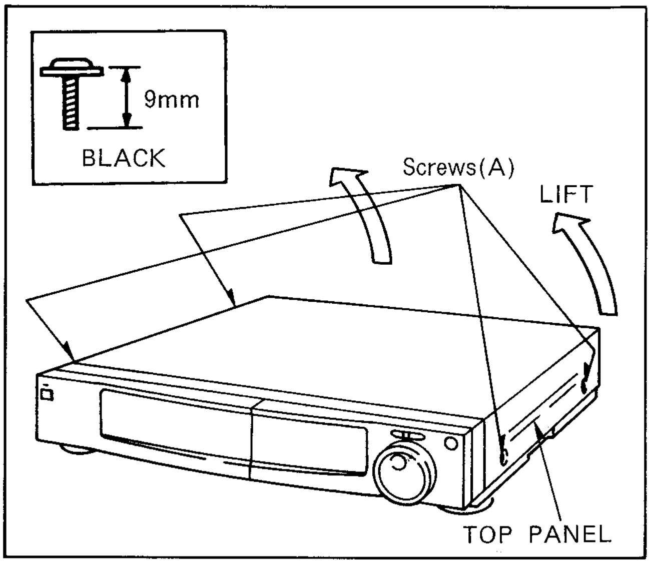

9mm
BLACK
Screws(A)
LIFT
TOP PANEL

Fig. D2

2. REMOVAL OF THE BOTTOM PLATE

Remove...6 Screws(B)

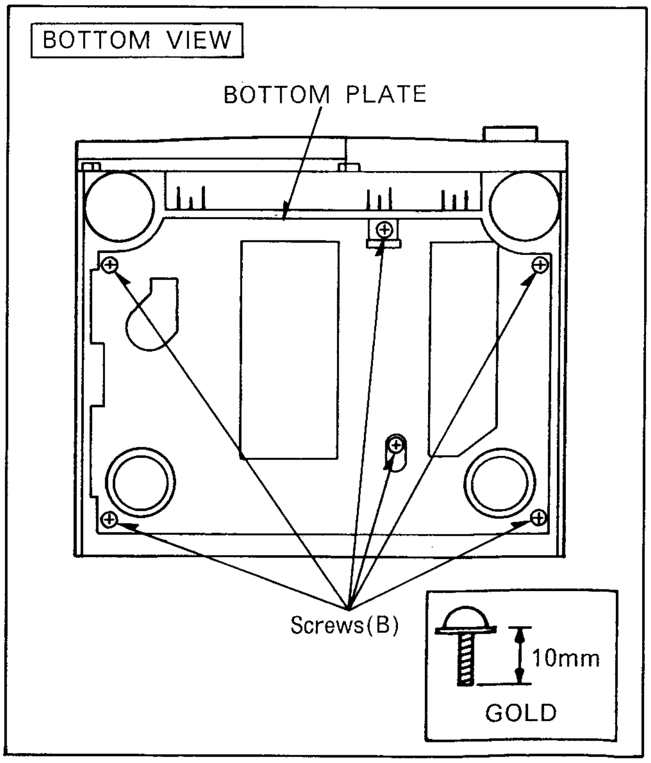

BOTTOM VIEW
BOTTOM PLATE
Screws(B)
10mm
GOLD

Fig. D3

3. REMOVAL OF THE FRONT PANEL UNIT

Remove...Screw(C)
Unlock...8 Tabs(D)
Disconnect...Connectors(E)

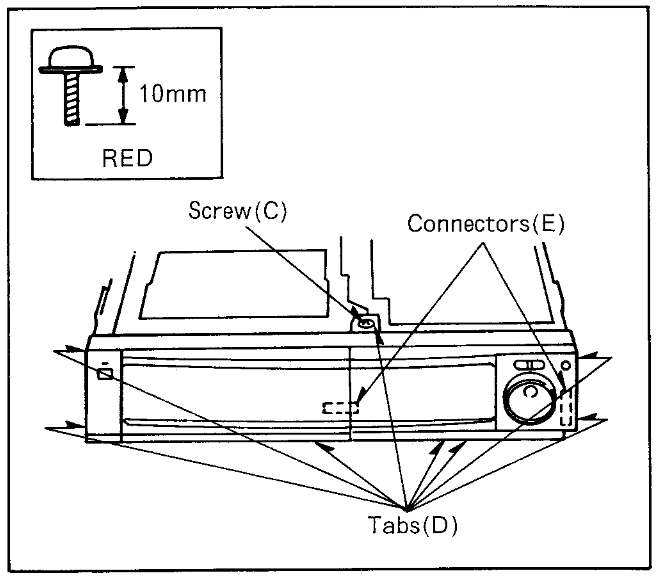

10mm
RED
Screw(C)
Connectors(E)
Tabs(D)

Fig. D4

4. REMOVAL OF THE TIMER C.B.A. & VR C.B.A.

REMOVAL OF THE TIMER C.B.A.

Disconnect...Bridge Connector(F)
Unlock...2 Tabs(G)

REMOVAL OF THE VR C.B.A.

Disconnect...Bridge Connector(F)
Unlock...3 Tabs(H)

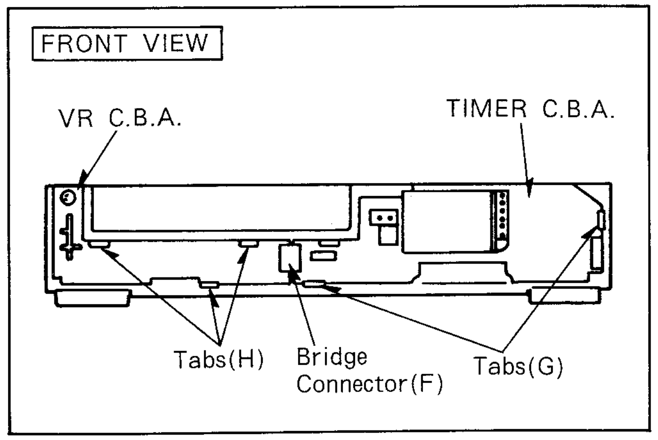

FRONT VIEW
VR C.B.A.
TIMER C.B.A.
Tabs(H)
Bridge Connector(F)
Tabs(G)

Fig. D5

5. REMOVAL OF THE MAIN C.B.A. & POWER SUPPLY UNIT

REMOVAL OF THE MAIN C.B.A.

Remove...3 Screws(I) (Fig. D6)
Remove...Screw(J) (Fig. D6)
Remove...3 Screws(K) (Fig. D6)
Remove...2 Screws(L) (Fig. D7)

REMOVAL OF THE POWER SUPPLY UNIT

Remove...2 Screws(M) (Fig. D6)
Remove...Screw(N) (Fig. D7)

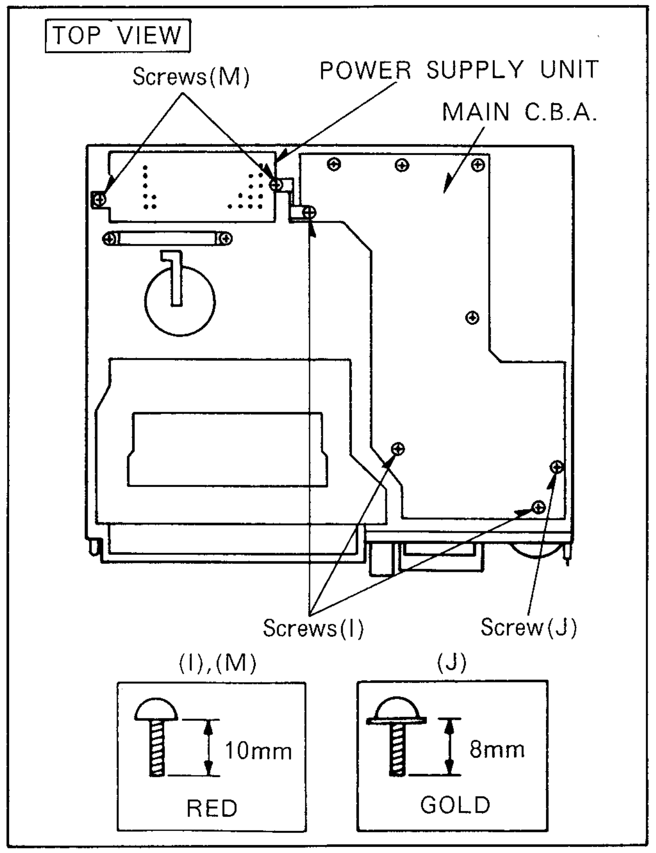

TOP VIEW
Screws(M)
POWER SUPPLY UNIT
MAIN C.B.A.
Screws(I)
Screw(J)
(I),(M)
10mm
RED
(J)
8mm
GOLD

Fig. D6

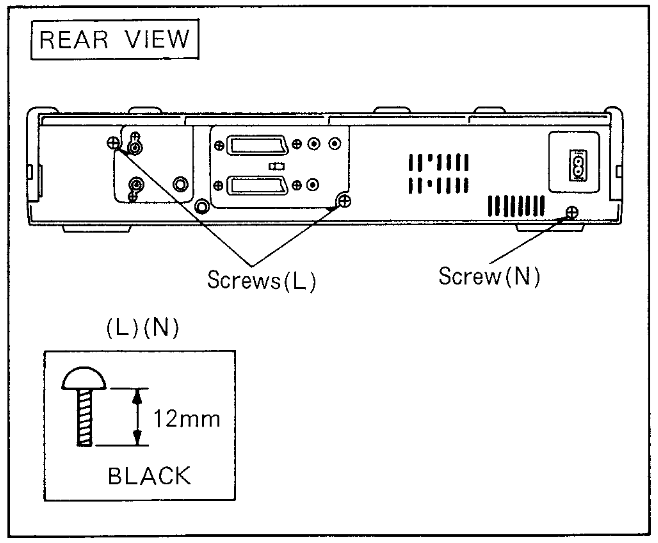

REAR VIEW
Screws(L)
Screw(N)
(L)(N)
12mm
BLACK

Fig. D7

6. PACK SERVICING POSITION

CAUTION:
Confirm that the isolation between Mechanical Chassis and Main C.B.A. before connecting Main AC Pluge.

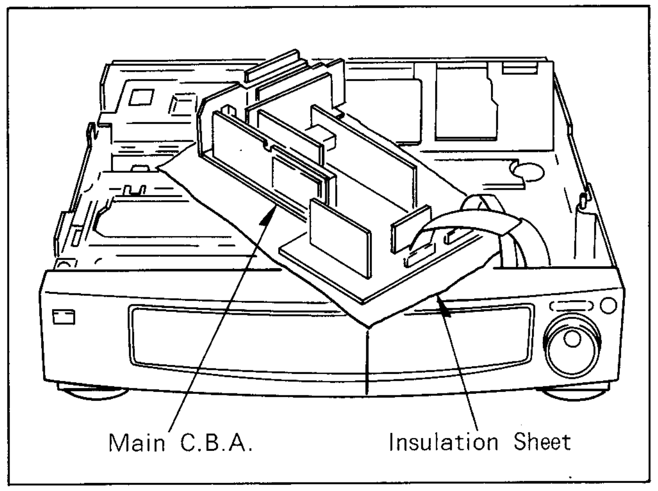

Main C.B.A.
Insulation Sheet

Fig. D8

7. REMOVAL OF THE CASSETTE COMPARTMENT

Remove the 2 screws(O) and screw(Q).
Slide the cassette holder unit for appearing 2 screws(P) by turning(clockwise) the Capstan Rotor Unit(located in the bottom side as shown in Fig.D9) and remove the 2 screws(P).
Remove the wire cable from connector P1508 mounted on Take-up Photo Tr. C.B.A., then carefully pull out the Cassette Compartment.

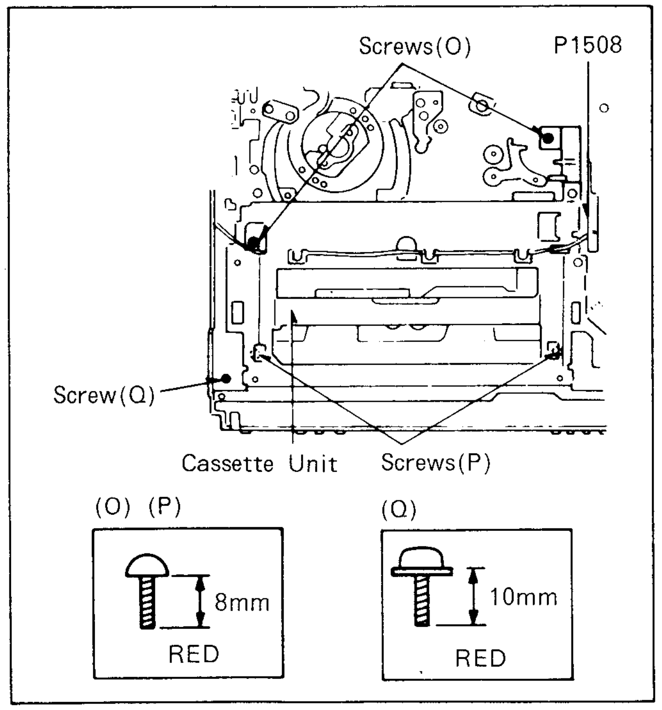

Screws(O)
P1508
Screw(Q)
Cassette Unit
Screws(P)
(O) (P)
8mm
RED
(Q)
10mm
RED

Fig. D9

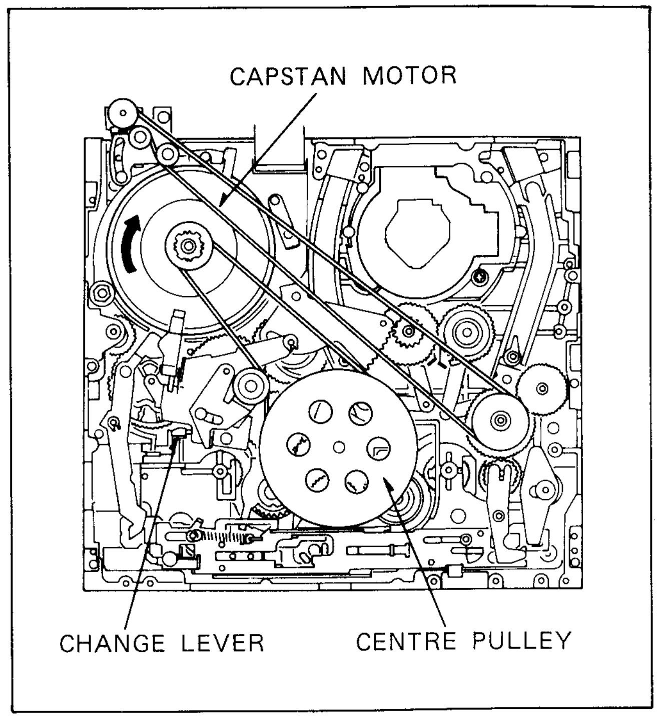

CAPSTAN MOTOR
CHANGE LEVER
CENTRE PULLEY

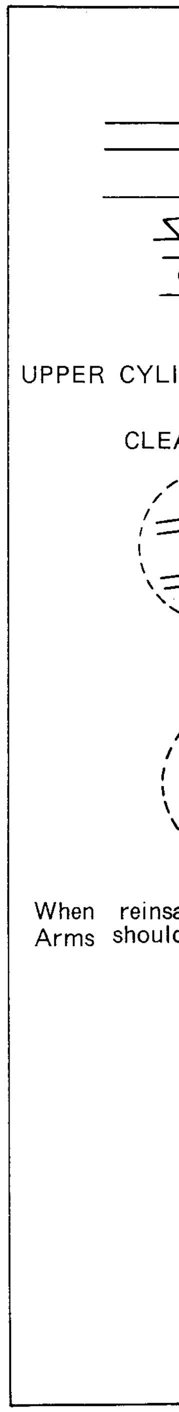
Fig. D10

NOTE:
When reinstalling the Cassette compartment, mechanical adjustment(alignment) must be performed for correct working. Refer to Service Manual. (G1 (G-Rev.) mechanical chassis) (Order No. VRD8901M101).

8. REMOVAL

1. Hook the
Hook(S).
2. Unlock the
the Cleaner

NOTE:
(1) Perforn
reassem
(2) When
Cleaner


UPPER CYLI
CLE

When reinsa
Arms shoulc

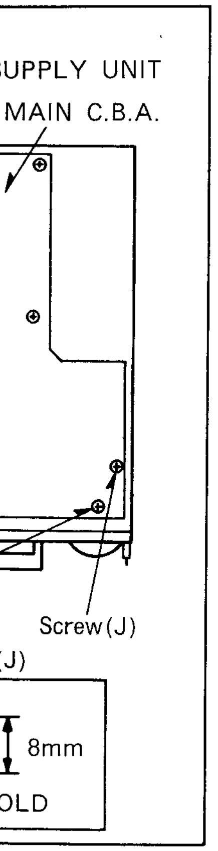
A. &

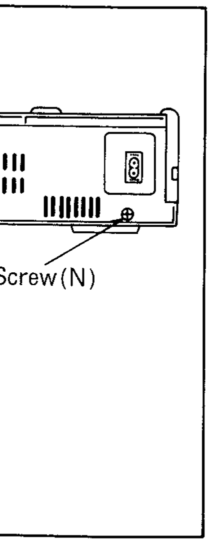
A.

)
5)
6)
7)

JPPLY UNIT

6)
7)


UPPLY UNIT
MAIN C.B.A.
Screw(J)
J)
8mm
OLD



6. PACK SERVICING POSITION

CAUTION:
Confirm that the isolation between Mechanical Chassis and Main C.B.A. before connecting Main AC Pluge.

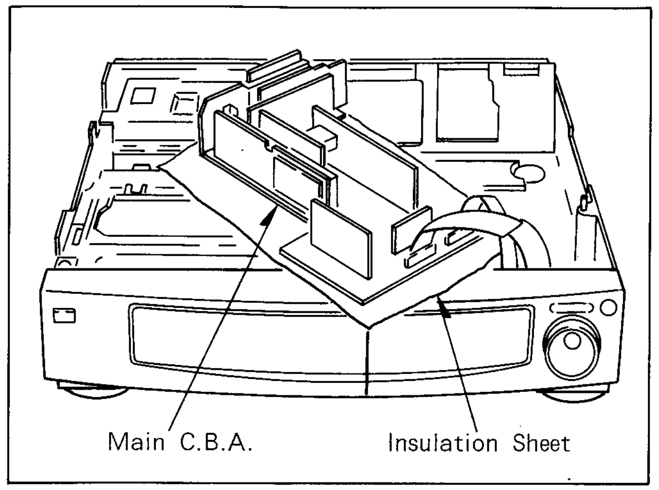

Main C.B.A.
Insulation Sheet

Fig. D8

7. REMOVAL OF THE CASSETTE COMPARTMENT

Remove the 2 screws(O) and screw(Q).
Slide the cassette holder unit for appearing 2 screws(P) by turning(clockwise) the Capstan Rotor Unit(located in the bottom side as shown in Fig.D9) and remove the 2 screws(P).
Remove the wire cable from connector P1508 mounted on Take-up Photo Tr. C.B.A., then carefully pull out the Cassette Compartment.

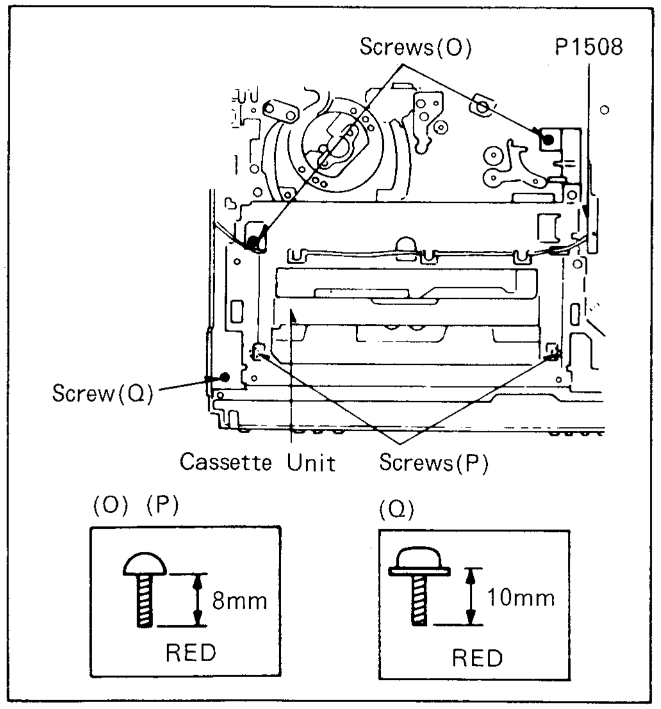

Screws(O)
P1508
Screw(Q)
Cassette Unit
Screws(P)
(O) (P)
8mm
RED
(Q)
10mm
RED

Fig. D9

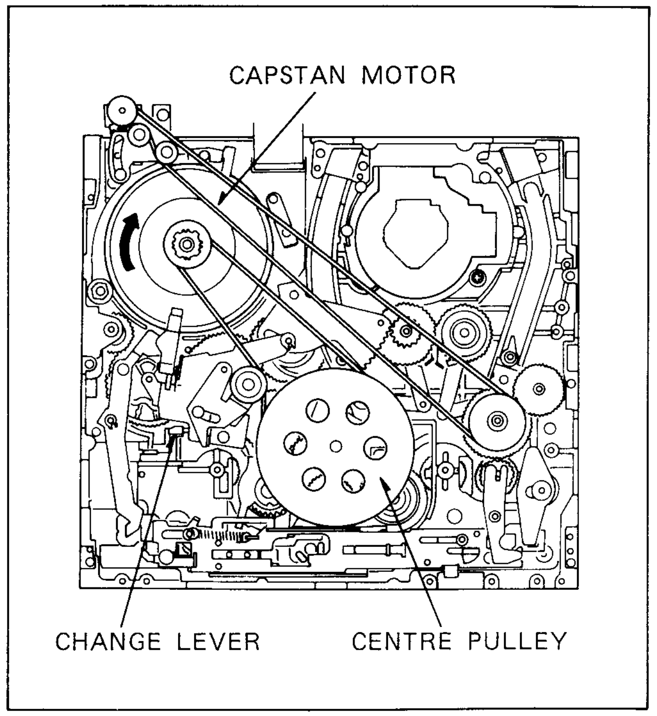

CAPSTAN MOTOR
CHANGE LEVER
CENTRE PULLEY

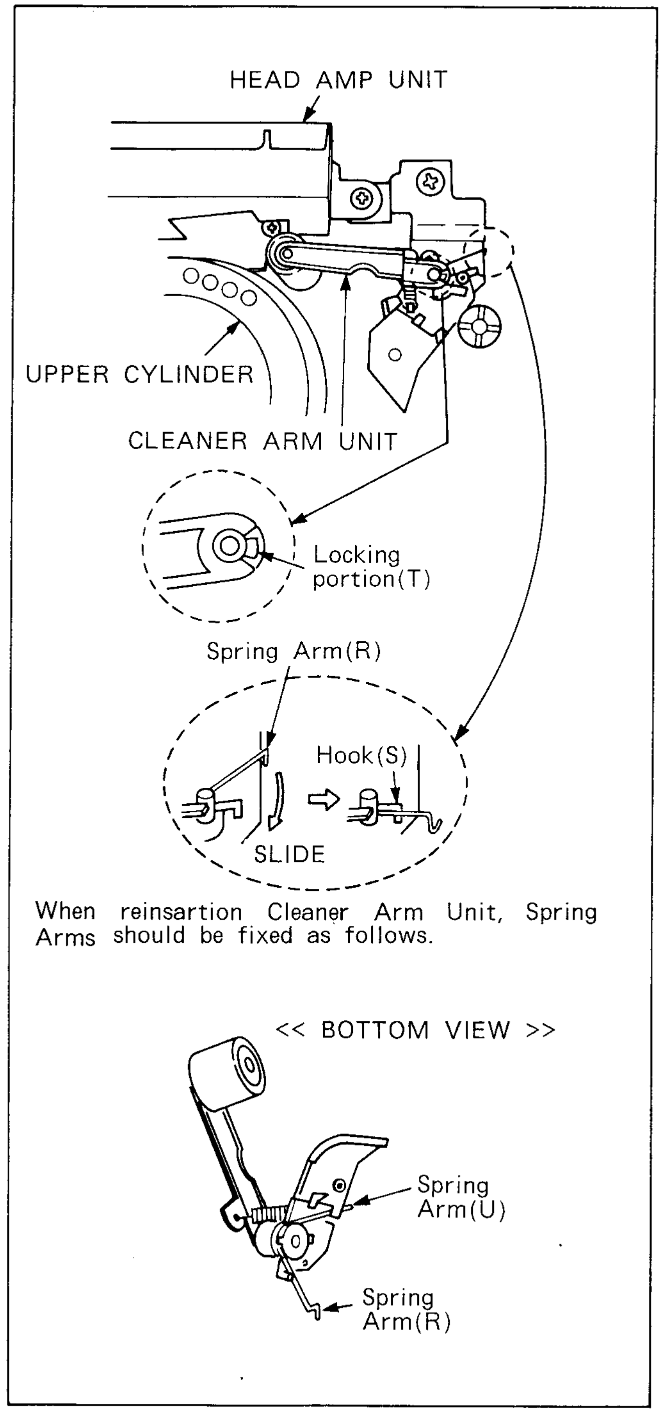
Fig. D10

NOTE:
When reinstalling the Cassette compartment, mechanical adjustment(alignment) must be performed for correct working. Refer to Service Manual. (G1 (G–Rev.) mechanical chassis) (Order No. VRD8901M101).

8. REMOVAL OF THE CLEANER ARM UNIT

1. Hook the Spring Arm(R) to lower side of Hook(S).
2. Unlock the locking portion(T) and then remove the Cleaner Arm Unit.

NOTE:
(1) Perform the steps in the reverse order when reassembling.
(2) When replacing Upper Cylinder, replace the Cleaner Arm Unit at the same time.


HEAD AMP UNIT
UPPER CYLINDER
CLEANER ARM UNIT
Locking portion(T)
Spring Arm(R)
Hook(S)
SLIDE
<< BOTTOM VIEW >>
Spring Arm(U)
Spring Arm(R)

When reinsartion Cleaner Arm Unit, Spring Arms should be fixed as follows.

Fig. D11

2-2. MECHANICAL ADJUSTMENT PROCEDURES

This mechanical chassis is the same as G1(G–Rev.) Mechanical Chassis.
Therefore please refer to the Service Manual G1(G–Rev.) Mechanical Chassis(Order No. VRD8901M101).

2-2-1. TAPE INTERCHANGEABILTY ADJUSTMENT

CAUTIONS:
To make a Adjustment Mode for Tape Interchangeabilty, connect a Cut Jumper Wire as shown in Fig. M1.
(Auto Tracking is fixed to centre position.)

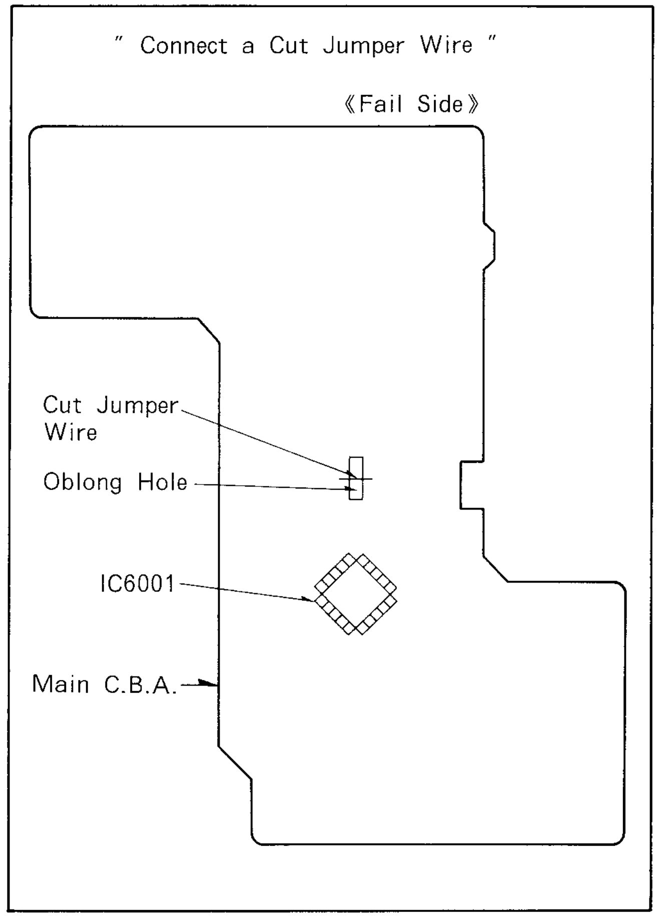
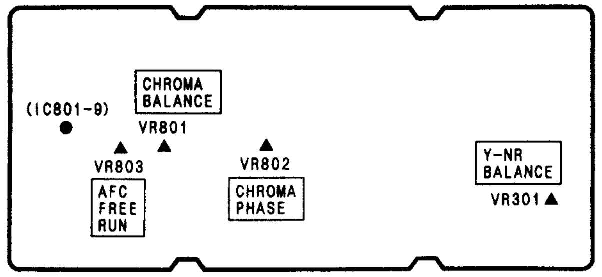

" Connect a Cut Jumper Wire "
《Fail Side》
Cut Jumper Wire
Oblong Hole
IC6001
Main C.B.A.

Fig. M1 Adjustment Mode

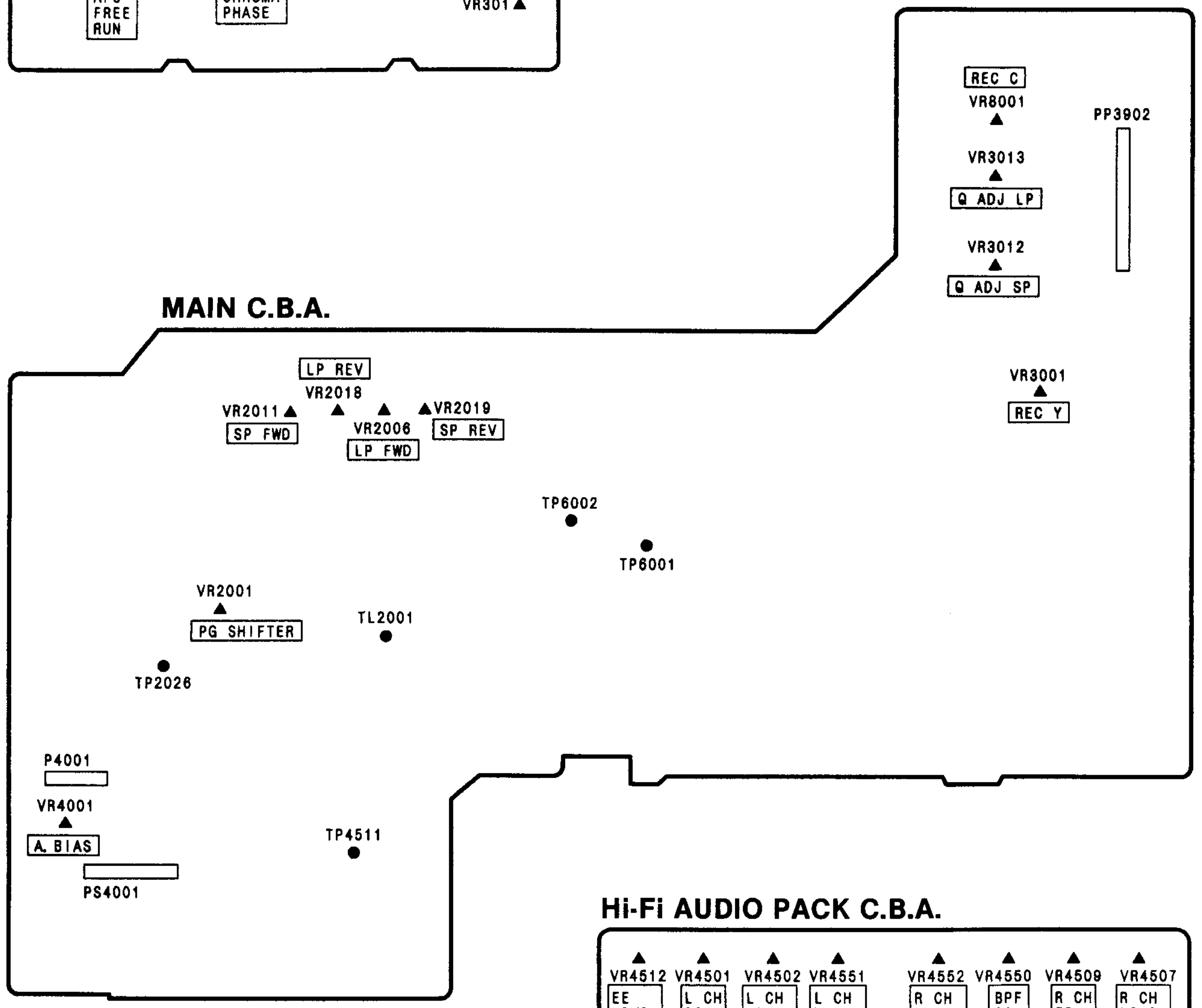
LOCATION OF TEST POINTS & CONTROLS

LUMINANCE & CHROMINANCE PACK C.B.A.



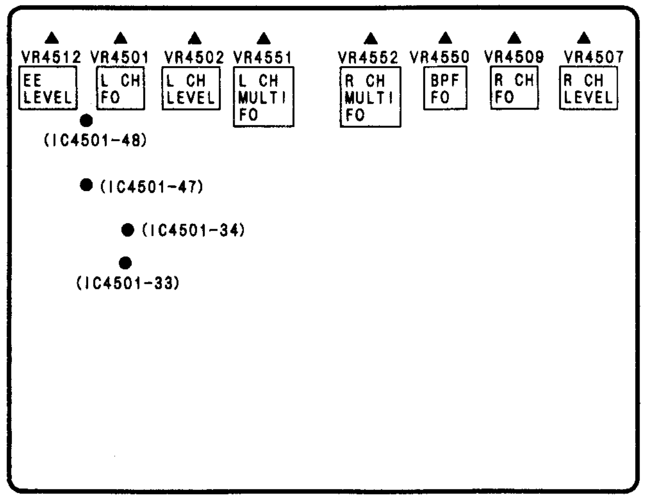
CHROMA BALANCE
(IC801-9)
VR801
VR803
VR802
Y-NR BALANCE
AFC FREE RUN
CHROMA PHASE
VR301

MAIN C.B.A.



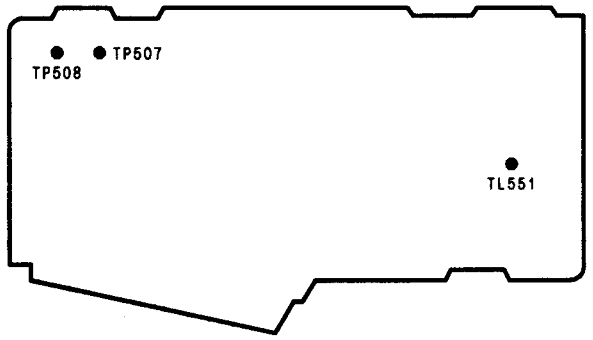
REC C
VR8001
PP3902
VR3013
Q ADJ LP
VR3012
Q ADJ SP
LP REV
VR2018
VR2011
VR2019
SP FWD
VR2006
SP REV
LP FWD
VR3001
REC Y
TP6002
TP6001
VR2001
PG SHIFTER
TL2001
TP2026
P4001
VR4001
A. BIAS
TP4511
PS4001

Hi-Fi AUDIO PACK C.B.A.



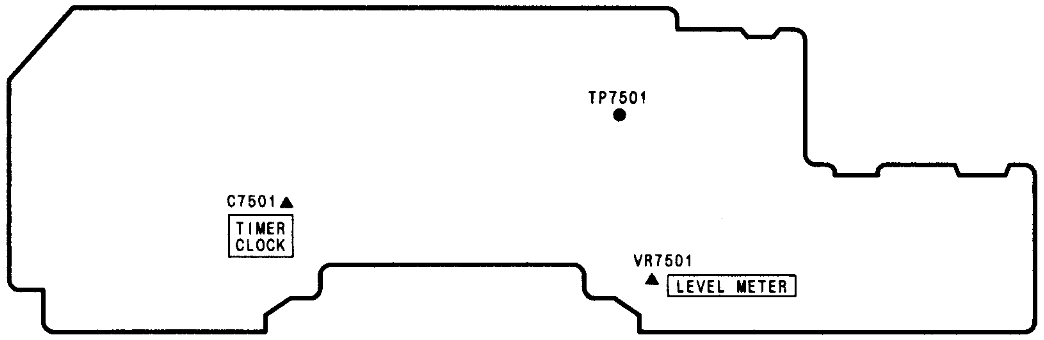
VR4512
VR4501
VR4502
VR4551
VR4552
VR4550
VR4509
VR4507
EE LEVEL
L CH FO
L CH LEVEL
L CH MULTI FO
R CH MULTI FO
BPF FO
R CH FO
R CH LEVEL
(IC4501-48)
(IC4501-47)
(IC4501-34)
(IC4501-33)

HEAD AMP C.B.A.



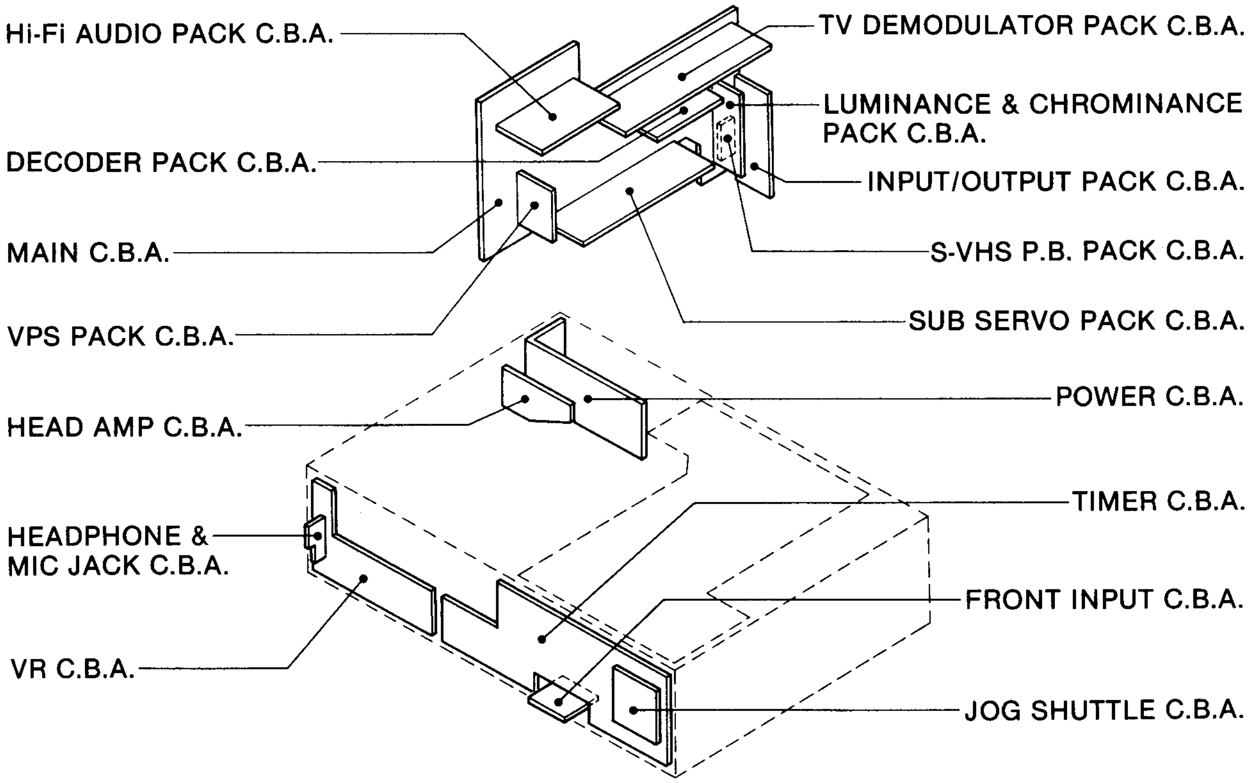
TP508
TP507
TL551

TIMER C.B.A.



TP7501
C7501
TIMER CLOCK
VR7501
LEVEL METER

CIRCUIT BOARD LAYOUT



Hi-Fi AUDIO PACK C.B.A.
TV DEMODULATOR PACK C.B.A.
LUMINANCE & CHROMINANCE PACK C.B.A.
DECODER PACK C.B.A.
INPUT/OUTPUT PACK C.B.A.
MAIN C.B.A.
S-VHS P.B. PACK C.B.A.
VPS PACK C.B.A.
SUB SERVO PACK C.B.A.
POWER C.B.A.
HEAD AMP C.B.A.
TIMER C.B.A.
HEADPHONE & MIC JACK C.B.A.
FRONT INPUT C.B.A.
VR C.B.A.
JOG SHUTTLE C.B.A.

2-3. ELECT
PROC

This section
adjustment proc
electric circuits c

2-3-1. TEST

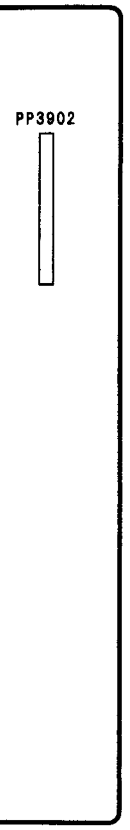
To perform th
following equipm

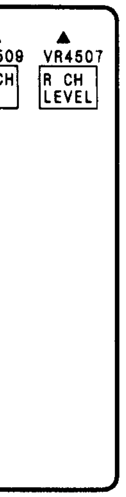
1. Dual–Trace
   Voltag
   Frequer
   Probes
2. Frequency C
   Frequer
   Probes
3. Vacuum Tub
4. Video Sweep
5. Sine Wave G
6. Video Patter
7. VHS Alignm
8. VHS Blank
9. Monitor.
10. Plastic Tip

2-3-2. PREPA

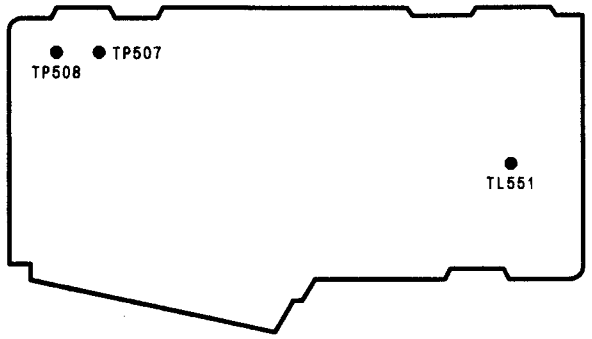
During adjustme
when no indicatio

PICTUR
Hi–Fi
TAPE
NOISE
Hi–Fi/
NTSC
TEST
CHANN
(Set to
AUDIO

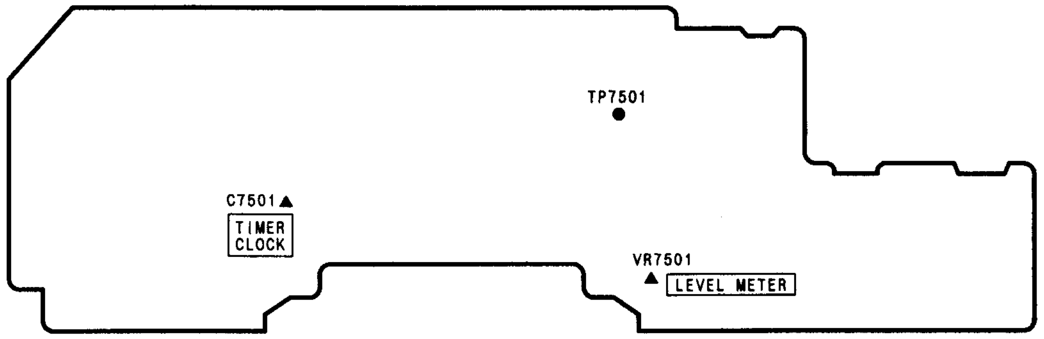



509
VR4507
CH
R CH LEVEL

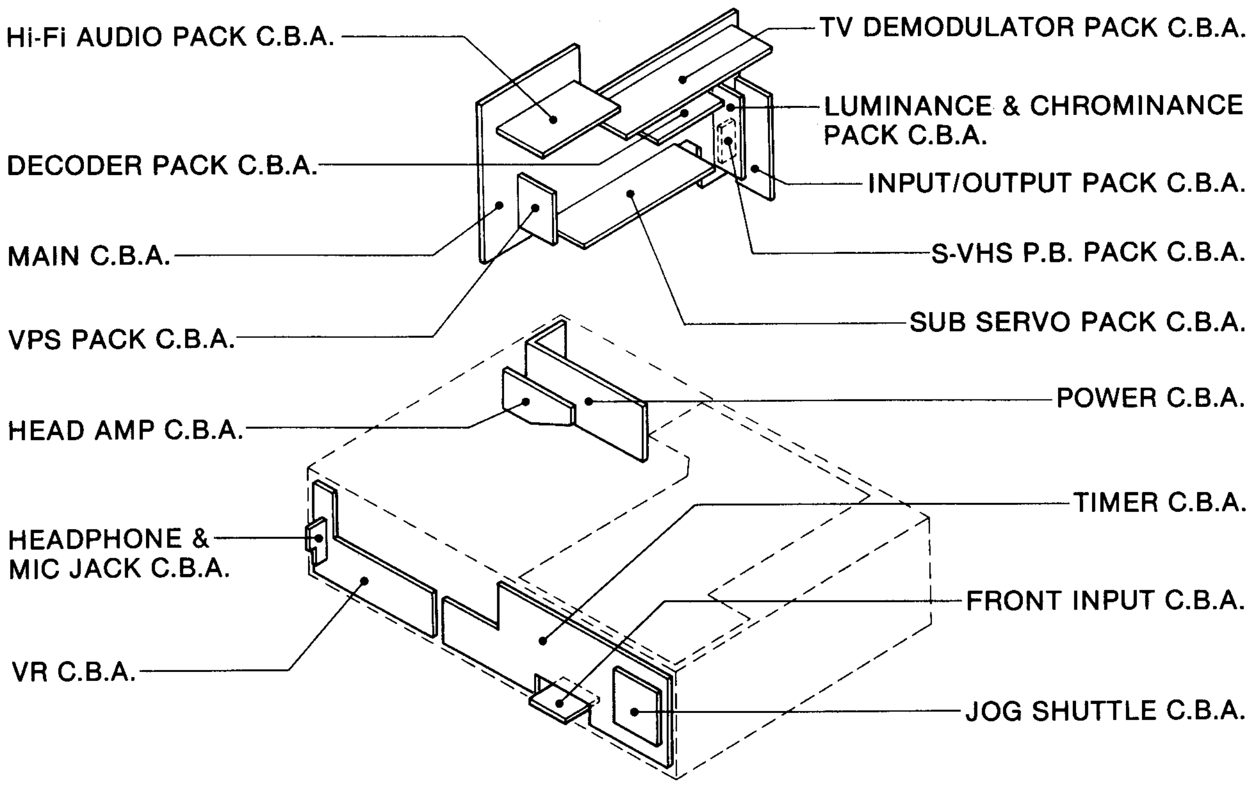
HEAD AMP C.B.A.


TP508
TP507
TL551

TIMER C.B.A.


TP7501
C7501
TIMER CLOCK
VR7501
LEVEL METER

CIRCUIT BOARD LAYOUT


Hi-Fi AUDIO PACK C.B.A.
DECODER PACK C.B.A.
MAIN C.B.A.
VPS PACK C.B.A.
HEAD AMP C.B.A.
HEADPHONE & MIC JACK C.B.A.
VR C.B.A.
TV DEMODULATOR PACK C.B.A.
LUMINANCE & CHROMINANCE PACK C.B.A.
INPUT/OUTPUT PACK C.B.A.
S-VHS P.B. PACK C.B.A.
SUB SERVO PACK C.B.A.
POWER C.B.A.
TIMER C.B.A.
FRONT INPUT C.B.A.
JOG SHUTTLE C.B.A.

2-3. ELECTRICAL ADJUSTMENT PROCEDURES

This section provides complete electrical adjustment procedures which may be required for electric circuits of VHS Video Cassette Recorder.

2-3-1. TEST EQUIPMENTS

To perform the electrical adjustments completely, following equipments are required.

1. Dual–Trace Oscilloscope. (More than 35 MHz)
    Voltage Range : 0.005–5V/div
    Frequency Range : DC–35MHz
    Probes : 10:1
2. Frequency Counter.
    Frequency Range : 0–10MHz
    Probes : 1:1
3. Vacuum Tube Volt Meter. (V.T.V.M.)
4. Video Sweep Generator.
5. Sine Wave Generator.
6. Video Pattern Generator.
7. VHS Alignment Tape. (VFJ8125H3F)
8. VHS Blank Tape.
9. Monitor.
10. Plastic Tip Driver.

2-3-2. PREPARATION

During adjustments, set each selector as follows when no indication on each procedures.

PICTURE VR............Centre Fix
Hi–Fi REC LEVEL VR.....Center Fix
TAPE SELECT SW.........E195 Side
NOISE FILTER EDIT SW...OFF
Hi–Fi/NORMAL MIX SW....OFF
NTSC 4.43 SW...........OFF
TEST SIGNAL SW(REAR)...OFF
CHANNEL................A1/A2/A3
(Set to signal input terminal number)
AUDIO OUTPUT SELECT....HiFi MODE

2-3-3. HOW TO READ ADJUSTMENT PROCEDURES

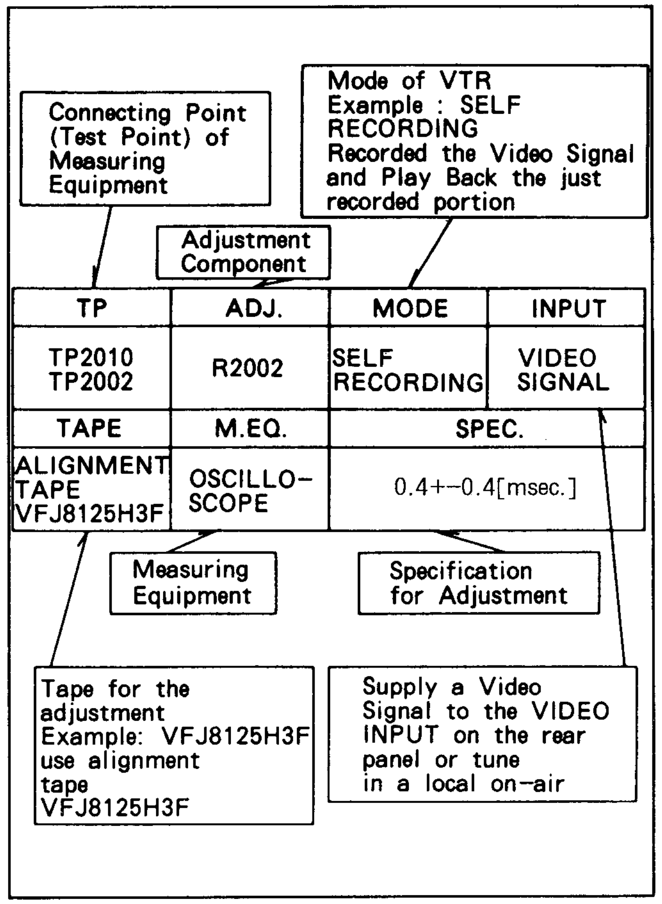

Connecting Point (Test Point) of Measuring Equipment
Mode of VTR Example : SELF RECORDING Recorded the Video Signal and Play Back the just recorded portion
Adjustment Component
TP
ADJ.
MODE
INPUT
TP2010 TP2002
R2002
SELF RECORDING
VIDEO SIGNAL
TAPE
M.EQ.
SPEC.
ALIGNMENT TAPE VFJ8125H3F
OSCILLO- SCOPE
0.4+-0.4[msec.]
Measuring Equipment
Specification for Adjustment
Tape for the adjustment Example: VFJ8125H3F use alignment tape VFJ8125H3F
Supply a Video Signal to the VIDEO INPUT on the rear panel or tune in a local on–air

Fig. E1

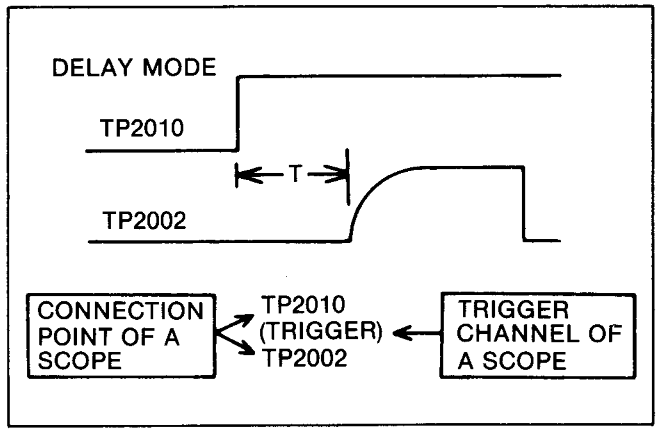

DELAY MODE
TP2010
T
TP2002
CONNECTION POINT OF A SCOPE
TP2010 (TRIGGER)
TP2002
TRIGGER CHANNEL OF A SCOPE

Fig. E2

2-3-4. ADJUSTMENT

SERVO SECTION

1. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL2001 PP3902-2	VR2001	PLAY BACK	
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	7.0±0.5 (H)	

1. Connect the oscilloscope to TL2001(H.SW) and PP3902–2(V.OUT).
2. Playback the alignment tape.
3. Adjust VR2001 so that the phase difference between falling edge of Head SW Pulse and V–Sync becomes 7.0+–0.5(H).

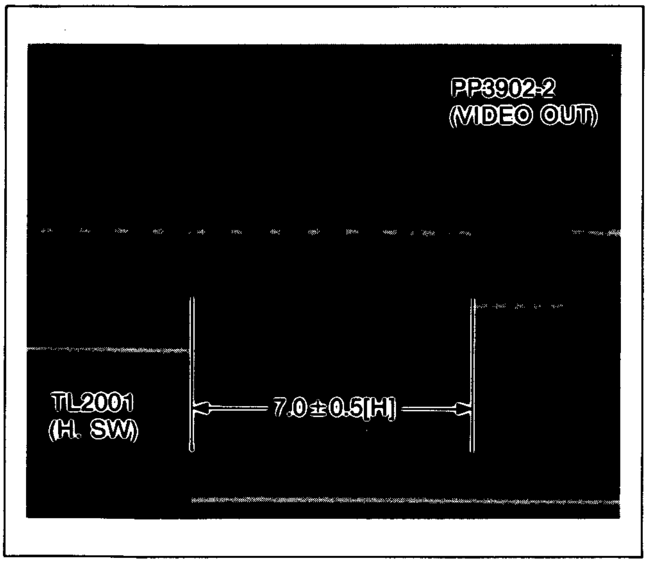


Fig. E3

2. SLOW TRACKING ADJUSTMENT (SP and LP mode)

TP	ADJ.	MODE	INPUT
MONITOR SCREEN	VR2011 (SP) VR2006 (LP)	SLOW	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
SELF RECORDED TAPE (SP/LP)	MONITOR TV	A=B (A+B)/V<1/6	

1. Connect a cut jumper wire as shown in Fig.E4.
2. Record the colour bar signal in SP(LP) mode for few time and playback the just recorded portion.
3. Place the unit in the slow mode by Shuttle Ring and then press the Tracking "+" and "–" buttons at the same time.

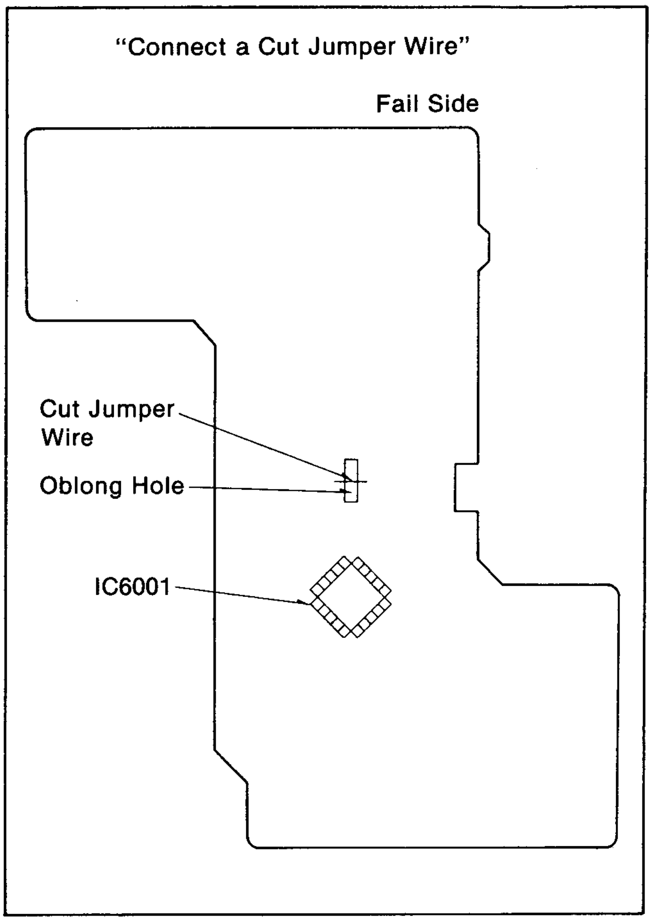
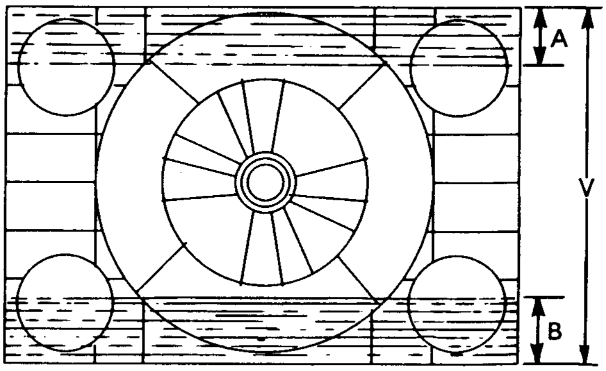


Fig.E4

4. Adjust VR2011(SP) (VR2006(LP)) so that the noise bar on the monitor screen becomes minimum. (Detail specifications are shown in Fig. E5)
5. Disconnect a jumper wire.



SLOW TR. ADJ.: A=B
(A+B)/V<1/6

REV. SLOW TR. ADJ.: SP: A=B
(A+B)/V≦1/6
LP: A=0
B/V≦1/3

Fig. E5

3. REVERSE SLOW TRACKING ADJUSTMENT (SP and LP mode)

TP	ADJ.	MODE	INPUT
MONITOR SCREEN	VR2019 (SP) VR2018 (LP)	REVERSE SLOW	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	MONITOR TV	SP: A=B (A+B)/V≦1/6 LP: A=0 B/V≦1/3	

1. Connect a cut jumper wire as shown in Fig.E4.
2. Record the colour bar signal in SP(LP) mode for few time and playback the just recorded portion.
3. Place the unit in the reverse slow mode by Shuttle Ring and then press the Tracking "+" and "−" buttons at the same time.
4. Adjust VR2019(SP) (VR2018(LP)) so that the noise bar on the monitor screen becomes minimum. (Detail specifications are shown in Fig. E5)
5. Disconnect a jumper wire.

LUMINANCE & CHROMINANCE SECTION

4. RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP507 (HOT) TP508 (GND)	VR3001 (Y) VR8001 (C)	SP RECORDING	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	Y: 117±5 (mVp-p) C: 28±2 (mVp-p)	

1. Record the colour bar signal.
2. Connect the oscilloscope to TP507(HOT) and TP508(GND).
3. Adjust VR3001(Y) so that the luminance level becomes 117+−5mVp−p.
4. Supply +5V DC to Pin 6 of Luminance & Chrominance Pack C.B.A. to reduce luminance component.
5. Adjust VR8001(C) so that the chrominance level becomes 28+−2mVp−p.

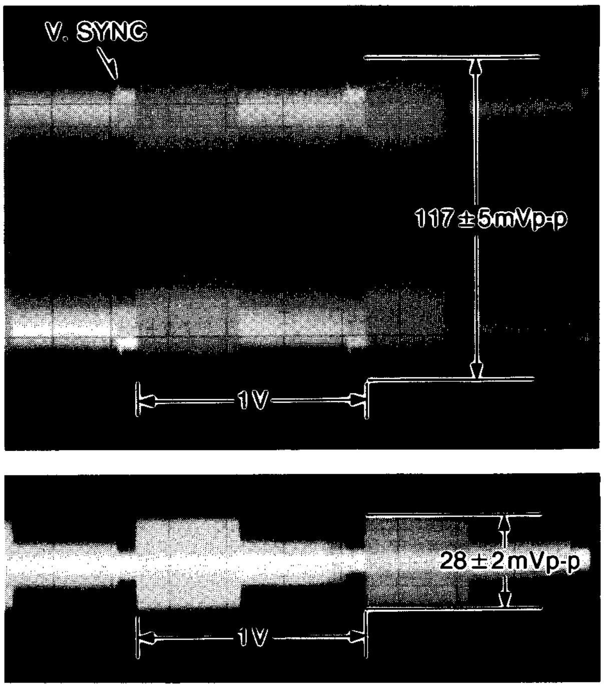
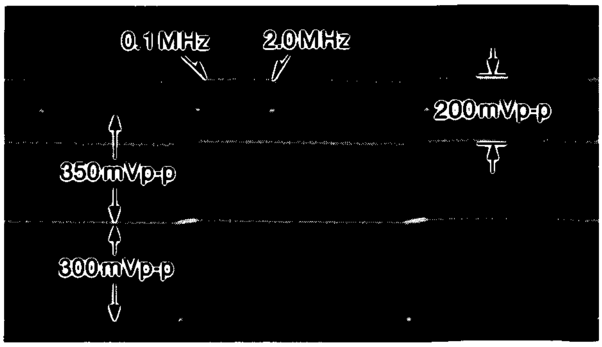


Fig. E6

5. VIDEO FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
PP3902-2	VR3012 (SP) VR3013 (LP)	SP/LP PLAYBACK (SELF RECORDED)	VIDEO SWEEP SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE/ VIDEO SWEEP GENERATOR	0.1 MHz: 2.0 MHz= 100%: 90∼110%	

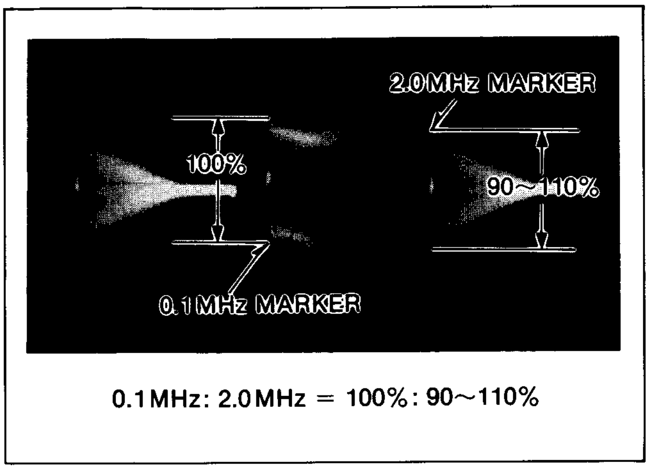
Note:
Set the markers of the sweep generator to 0.1MHz and 2.0MHz and supply the video sweep signal (200mVp−p) to Line In terminal.



CONDITIONA: BURST SIGNAL OFF
75ohm TERMINATED

Fig. E7

1. Connect a jumper wire between pin 7 of Luminance & Chrominance Pack C.B.A. and GND.
2. Record the Video Sweep Signal in SP (LP) mode for few time and playback the just recorded portion.
3. Connect the oscilloscope to PP3902–2.
4. Adjust VR3012 (SP) (VR3013 (LP)) so that the frequency response (level) becomes 90–110% at 2MHz portion by comparing with 0.1MHz portion.



0.1MHz: 2.0MHz = 100%: 90~110%

Fig. E8

6. Y-NR BLANCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC302-(17)	VR301	LP RECORDING	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	MINIMIZED AS POSSIBLE (Less than 50mVp-p)	

Note:
Connect the capacitor(1500pF) between IC302–17 and GND as shown in Fig.E9.

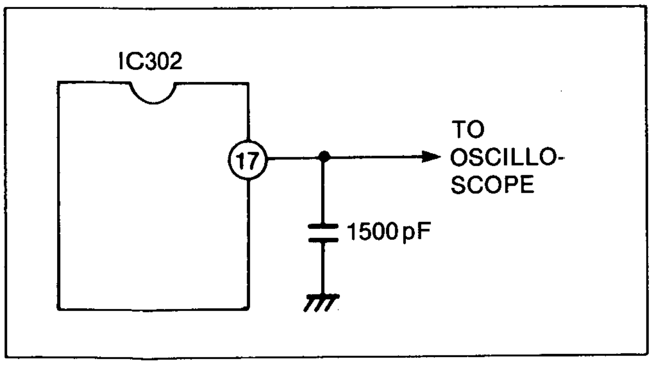


Fig.E9

1. Connect the oscilloscope to IC302–17.
2. Record the colour bar signal in LP mode.
3. Adjust VR301 so that the waveform becomes minimum as follows.
4. Disconnect the capacitor.

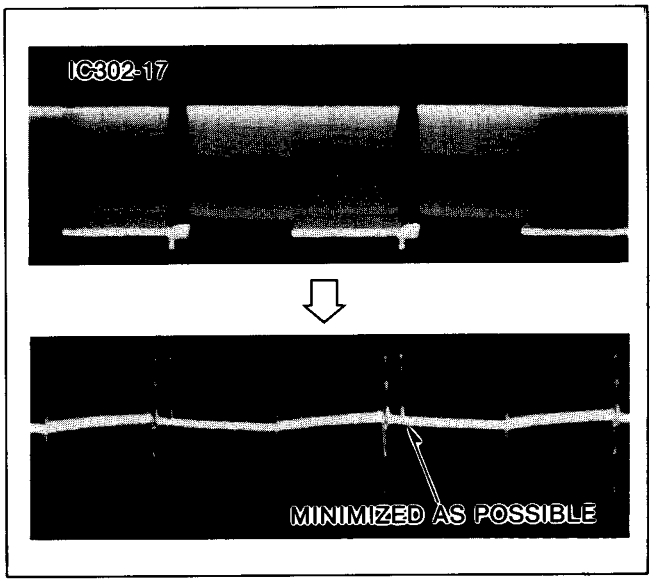


Fig.E10

7. CHROMA RECURSIVE ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC302-(17)	VR802 VR801	SP PLAYBACK	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	MINIMIZED AS POSSIBLE	

1. Record the colour bar signal in SP mode for few time and playback the just recorded portion.
2. Connect the oscilloscope to IC302–17.
3. Adjust VR801 and VR802 alternately so that the chrominance signal becomes minimum as follows.

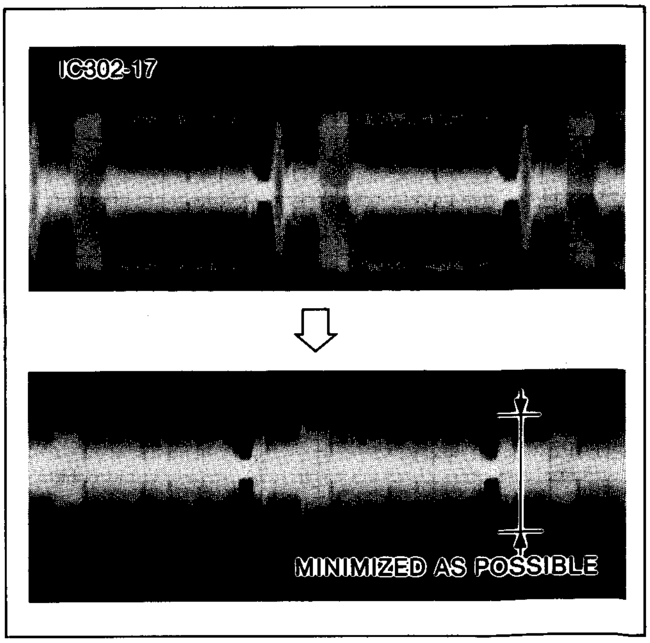


Fig. E11

8. ARTIFICIAL NTSC AFC FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC801-(9)	VR803	STOP	SINEWAVE 8kHz −10dB (316mV)
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER/ SINEWAVE GENERATOR	15735±100 (Hz)	

1. Supply +5V DC to IC801−27.
2. Supply the sinewave (8kHz/−10dB) to Video Line In terminal.
3. Connect the frequency counter to IC801−9.
4. Turn VR803 fully to clockwise or counter−clockwise which is maximum frequency side.
5. Adjust VR803 so that the frequency becomes 15735+−100Hz.

AUDIO SECTION

9. AUDIO BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
P4001-4 (HOT) PS4001-6 (GND)	VR4001	SP RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	V.T.V.M	2.9±0.1 [mVrms]	

1. Place the unit in SP Recording mode.
2. Connect the V.T.V.M. to P4001−4(HOT) and PS4001−6(GND).
   (Do not use long cable for connection.)
3. Adjust VR4001 so that the V.T.V.M. level becomes 2.9+−0.1mVrms.

Hi-Fi AUDIO SECTION

10. Hi-Fi E-E LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT	VR4512	STOP	1kHz, −10dB AUDIO SIG.
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	SINEWAVE GENERATOR/ V.T.V.M.	380~420 [mVrms]	

1. Select the STEREO mode by pressing the Audio Out button on the Door Panel. (Both Left and Right indicators on the FIP are lit.)
2. Supply the sinewave (1kHz/−10dB) to Audio Input (L) terminal.
3. Connect the V.T.V.M. to Audio Output (L) terminal.
4. Adjust VR4512 so that the level becomes 380 − 420 mVrms.

11. CARRIER FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC4501-34 (L) IC4501-47 (R)	VR4501 (L) VR4509 (R) VR4551 (L) VR4552 (R)	SP RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	FREQUENCY COUNTER	NTSC-L : 1.3±0.003 [MHz] NTSC-R: 1.7±0.003 [MHz] PAL-L : 1.4±0.003 [MHz] PAL-R : 1.8±0.003 [MHz]	

1. Place the unit in SP Recording mode.
2. Set the NTSC 4.43 SW on the Front Panel to ON position.
3. Connect the frequency counter to IC4501−34.
4. Adjust VR4501 so that the frequency becomes 1.3+−0.003MHz.
5. Connect the frequency counter to IC4501−47.
6. Adjust VR4509 so that the frequency becomes 1.7+−0.003MHz.
7. Set the NTSC 4.43 SW on the Front Panel to OFF position.
8. Connect the frequency counter to IC4501−34.
9. Adjust VR4551 so that the frequency becomes 1.4+−0.003MHz
10. Connect the frequency counter to IC4501−47.
11. Adjust VR4552 so that the frequency becomes 1.8+−0.003MHz.

12. DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
BETWEEN VR4502 and R4511 (L) BETWEEN VR4507 and R4561 (R)	VR4502 (L) VR4507 (R)	SP RECORDING	1kHz, −10dB AUDIO SIG.
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	V.T.V.M./ SINEWAVE GENERATOR	120 [mVrms]	

1. Set the NTSC 4.43 SW on the Front Panel to OFF position.
2. Set the output level of the Signal Generator to 1kHz/−10dB and supply it to both Audio Input terminals (L) and (R).
3. Adjust the recording level (Line output) with Hi−Fi Rec Level VR on the Front Panel so that the both audio outputs (L) and (R) are 400mVrms (V.T.V.M.).
4. Connect the V.T.V.M. between VR4502 and R4511.
5. Adjust VR4502 so that the level becomes 120mVrms.
6. Connect the V.T.V.M. between VR4507 and R4561.
7. Adjust VR4507 so that the level becomes 120mVrms.

13. FM B.P.F. ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC4501-33 (L) IC4501-48 (R)	VR4550	PLAYBACK	1.608 MHz 400 mVp-p SINEWAVE SIG.
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE (VFJ8125H3F)	OSCILLO-SCOPE/ SINEWAVE GENERATOR	L ch=R ch	

1. Set the NTSC 4.43 SW to OFF position.
2. Disconnect P551 (from Main C.B.A. to Head AMP Pack)
3. Set the output of the Signal Generator to 1.608MHz/400mVp–p and supply it to PS4003–8.
4. Playback the alignement tape.
5. Connect the oscilloscope to IC4501–33 and 48. (Connect the GND terminal for oscilloscope to GND of FM Pack to reduce the noise.)
6. Adjust VR4550 so that the Lch(pin 33) and Rch(pin 48) are the same level.
7. After this adjustment, connect P551.

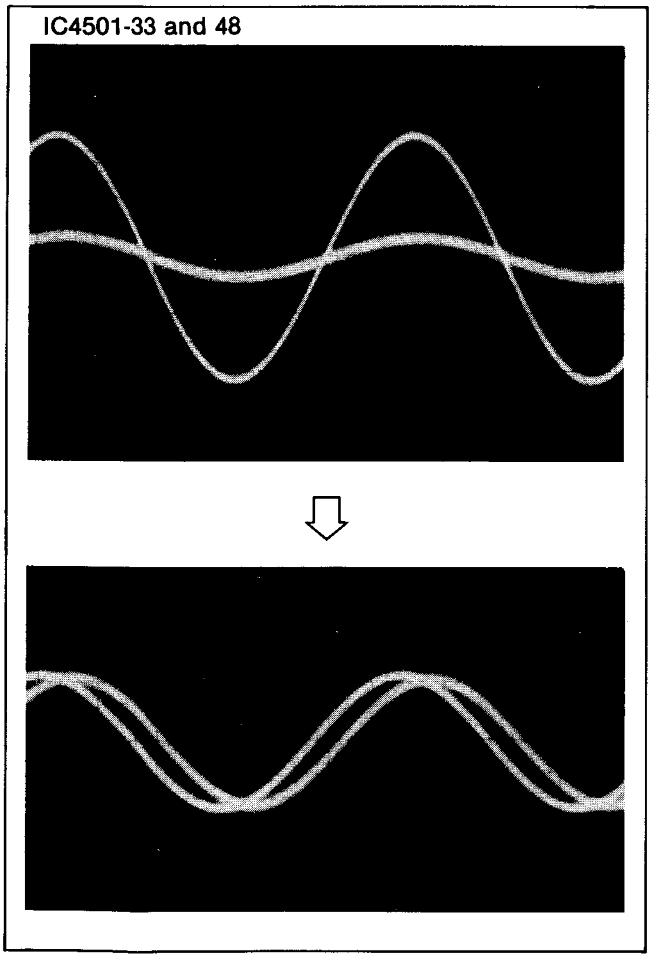


Fig. E12

TIMER SECTION

14. LEVEL METER SENSITIVITY ADJUSTMENT

TP	ADJ.	MODE	INPUT
LEVEL METER ON THE FRONT PANEL	VR7501	STOP	1 kHz, −10 dB AUDIO SIG.
TAPE	**M. EQ.**	**SPEC.**	
		0 [dB] INDICATOR ON THE AUDIO LEVEL METER JUST LIGHTS UP	

1. Select the STEREO mode by pressing the Audio Out button on the Door Panel. (Both Left and Right indicators on the FIP are lit.)
2. Set the output level of the Signal Generator to 1kHz/–10dB and supply it to both Audio Input terminals (L) and (R).
3. Adjust the recording level (Line output) with Hi–Fi Rec Level VR on the Front Panel so that the both audio outputs (L) and (R) are 400mVrms (V.T.V.M.).
4. Adjust VR7501 so that the 0dB of the Level Meter on the FIP just lights up.

15. TIMER REFERENCE CLOCK ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL7501	C7501	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	UNIVERSAL COUNTER	7812.5±0.015 [μsec]	

1. Connect the universal counter to TP7501.
2. Adjust C7501 so that the frequency becomes 7812.5+–0.015us.

Memo:

SECTION 3
ABBREVIATIONS & BLOCK DIAGRAMS

3-1. ABBREVIATIONS

443NT [L]	4.43 NTSC Ⓛ
A. COMP	AUDIO COMPONENT SIGNAL
A. COMPO	AUDIO COMPONENT SIGNAL
A. D.P [L]	AUDIO DUBBING PAUSE Ⓛ
A. D/L [L]	AUDIO DUBBING PAUSE Ⓛ
A. DEF [S]	AUDIO DEFEAT
A. DEF [S] [L]	AUDIO DEFEAT
A. DUB P [L]	AUDIO DUBBING PAUSE Ⓛ
A. DUB [H]	AUDIO DUBBING Ⓗ
A. ERASE	AUDIO ERASE
A. H. SW	AUDIO HEAD SWITCHING PULSE
A. HEAD [R]	AUDIO HEAD (REC)
A. HEAD [W]	AUDIO HEAD (PLAY)
A. IN [L]	AUDIO INPUT (L)
A. IN [R]	AUDIO INPUT (R)
A. MUT [H]	AUDIO MUTE Ⓗ
A. MUTE [H]	AUDIO MUTE Ⓗ
A. OUT [L]	AUDIO OUTPUT (L)
A. OUT [R]	AUDIO OUTPUT (R)
A. RF OUT	AUDIO RF SIGNAL OUTPUT
A/VS/S. DATA	AV SW/SERIAL DATA
AC ONLINE	AC ONLINE
AC. O/EE. H	AC ONLINE/EE Ⓗ
AFC S C	AFC S CURVE
AFC [S]	AFC S CURVE
AFC. DEF	AFC DEFEAT
ARFC OUT	AUDIO RF SIGNAL OUTPUT
ART. V	ARTIFICIAL VERTICAL SYNC SIGNAL
ART. V. MM	ARTIFICIAL VERTICAL SYNC SIGNAL MONO MULTI
ART. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL Ⓗ/NORMAL
AT. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL
ATSW/TEST/NOR/SE	TEST/NORMAL/SERVICE
AUDIO IN [L]	AUDIO INPUT (L)
AUDIO IN [R]	AUDIO INPUT (R)
AUDIO OUT [L]	AUDIO OUTPUT (L)
AUDIO OUT [R]	AUDIO OUTPUT (R)
AUDIO SELECT [H]	AUDIO SELECT Ⓗ
AUDIO. L	AUDIO (L)
AUDIO. R	AUDIO (R)
AV CNT	AV CONTROL
AV CTL	AV CONTROL
AV CTL/S. CLK	AV CONTROL/SERIAL CLOCK
AV. C.M.	AV CONTROL MODE
AVCNT/METER. R	AV CONTROL/LEVEL METER (R)
AVSW/METER. L	AV SW/LEVEL METER (L)
B MODE. H	B MODE Ⓗ
B.G.P	BURST GATE PULSE
BACKUP 5V	BACK UP 5V
BAND. U.E.	BAND U
BANDVL. D	BAND VL
BI/MI [L]	BILINGUAL/MIX Ⓛ
BIL	BILINGUAL
BIL [L]	BILINGUAL Ⓛ

BIL. [H]	BILINGUAL Ⓗ
BIL/M1 [L]	BILINGUAL Ⓛ
BS CLOCK	BS CLOCK
BS DATA	BS DATA
BS LCH IN	BS L CHANNEL INPUT
BS MIX [H]	BS MIX Ⓗ
BS MON [H]	BS MONITOR Ⓗ
BS MONI [H]	BS MONITOR Ⓗ
BS RCH IN	BS R CHANNEL INPUT
BS VIDEO	BS VIDEO SIGNAL
BS VIDEO/BS1	BS VIDEO SIGNAL
BS [H]	BS Ⓗ
BS. LEVEL	BS LEVEL
BS. M [H]	BS MONITOR Ⓗ
BS/VTR [H]	BS/VTR Ⓗ
BUS CLK	BUS CLOCK
BUS LSN	BUS LISTEN
BUS TLK	BUS TALK
BUZZER	BUZZER
CAP EC	CAPSTAN TORQUE CONTROL
CAP M GND	CAPSTAN MOTOR GND
CAP. ET	CAPSTAN TORQUE CONTROL
CAP. FG1	CAPSTAN FG1 PULSE
CAP. FG2	CAPSTAN FG2 PULSE
CAS. SW	CASSETTE SW
CCN	PLAYBACK CONTROL SIGNAL (−)
CCP	PLAYBACK CONTROL SIGNAL (+)
CHM	CONTROL SIGNAL (+)
CHP	CONTROL SIGNAL (−)
CINEM [L]	CINEMA Ⓛ
CINEMA [L]	CINEMA Ⓛ
CINEMA/MIX	CINEMA/MIX
CKL	RATCH LOCK
CKS	SHIFT LOCK
CL	CLOCK
CLK	CLOCK
CLK (C.G)	CLOCK
CLOCK. IN	CLOCK INPUT
CLP	CLAMP
COL/B/W/NOR	COLOUR/BLACK & WHITE/NORMAL
COLOR [H]	COLOUR Ⓗ
CONV	CONVERTOR
CS	CHIP SELECT
CTL GND	CONTROL GND
CTL HEAD [+]	CONTROL HEAD (+)
CTL HEAD [−]	CONTROL HEAD (−)
CTL [+]	CONTROL HEAD (+)
CTL [−]	CONTROL HEAD (−)
CUE BIAS	CUE BIAS
CURRENT LIM	CURRENT LIMMITER
CYL ET	CYLINDER TORQUE CONTROL
CYL GND	CYLINDER GND
D.F.M. REC [H]	DELAIED FM RECORDING Ⓗ
D. FM REC [L]	DELAIED FM RECORDING Ⓛ
D. GND	DIGITAL GND

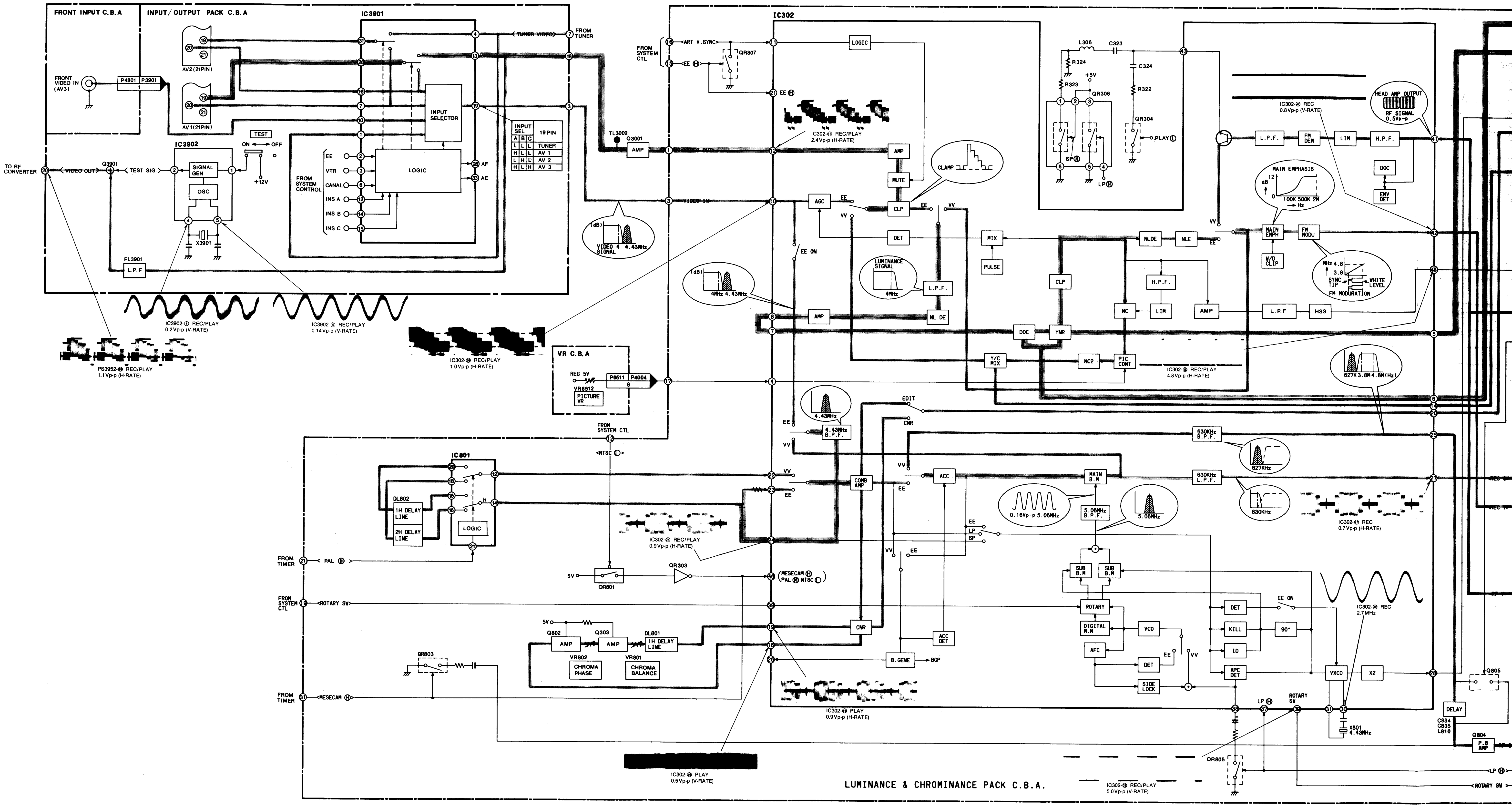
D. REC [H]	DELAYED RECORDING Ⓗ
D4/S. LED	D4/STILL LED
D4/STILLED	D4/STILL LED
DAC [CLK]	TUNER DAC (CLOCK)
DAC/FSCS	TUNER DAC/FS CHIP SELECT
DAREC [H]	DELAYED AUDIO RECORDING Ⓗ
DATA	DATA
DECODER [L]	DECODER (L)
DECODER [R]	DECODER (R)
DEW	DEW
DEW SNS	DEW SENSOR
DFMRE [H]	DELAYED FM AUDIO RECORDING Ⓗ
E. REC 5V	EXCEPT RECORDING 5V
EC	ERROR TORQUE CONTROL
ECR	ERROR TORQUE CONTROL REFERENCE VOLTAGE
EDT TRIG [L]	EDIT TRIGGER Ⓛ
EDIT [H]	EDIT Ⓗ
EE [H]	EE Ⓗ
EE [H]/INS [M]	EE Ⓗ/INSERT Ⓜ
EE. VV. TR	EE/VV/TRICK PLAY
EJECT. PO	EJECT POSITION
EJECT/VDET	EJECT/REVERSE SLOW LOCK
ENV. SEL	ENVELOPE SELECT
ENVE. OUT	ENVELOPE OUTPUT
ENVE. SEL	ENVELOPE SELECT
ENV SELECT	ENVELOPE SELECT
EP [H]	LP Ⓗ
EP/LP [H]	LP Ⓗ
EP/LP/SP	LP/SP
EP/SS [H]	LP/SLOW/STILL/STOP Ⓗ
EPROMCS	EPROM CHIP SELECT
EX. REC 5V	EXCEPT RECORDING 5V
FF/REW [L]	FIRST FORWARD/REWIND Ⓛ
FG1 IN	FG1 PULSE INPUT
FG2 IN	FG2 PULSE INPUT
FILTER ADJUSTMEN	FILTER ADJUSTMENT
FLY ERASE [H]	FLYING ERASE HEAD ON Ⓗ
FLY ON [H]	FLYING ERASE E HEAD ON Ⓗ
FLY. E [H]	FLYING ERASE HEAD ON Ⓗ
FM MUT [H]	FM AUDIO MUTE Ⓗ
FM MUTE [H]	FM AUDIO MUTE Ⓗ
FM OUT [L]	FM OUTPUT (L)
FM OUT [R]	FM OUTPUT (R)
FM PACK OUT [L]	FM PACK OUTPUT (L)
FM PACK OUT [R]	FM PACK OUTPUT (R)
FM/BS SEL [L]	FM/BS SELECT (L)
FM/BS SEL [R]	FM/BS SELECT (R)
FS. CLK	FS CLOCK
FUL. E [H]	FULL ERASE HEAD ON Ⓗ
FULL. E [H]	FULL ERASE HEAD ON Ⓗ
FULL. E. 12V	FULL ERASE 12V
GND [A]	GND (ANALOGUE)
GND [TU]	GND (TUNER)
GND/N. SW. 12V	GND/NON SW 12V
H. SYNC	HORIZONTAL SYNC
H. AMP. SW	HEAD AMP SW PULSE
H. P <R>	HEAD PHONE (R)
H. P <L>	HEAD PHONE (L)
H. P GND	HEAD PHONE GND
H. P OUT [L]	HEAD PHONE OUTPUT (L)
H. P OUT [R]	HEAD PHONE OUTPUT (R)
H. SW	HEAD SW PULSE
HEAD PHONE [L]	HEAD PHONE (L)
HEAD PHONE [R]	HEAD PHONE (R)
HEAD SW	HEAD SW
HEATER [+]	HEATER (+)
HEATER [−]	HEATER (−)
HSS	HORIZONTAL SYNC SIGNAL
HTR [+]	HEATER (+)
HTR [−]	HEATER (−)
I RFE	REFERENCE CURRENT
ICL	CONTROL AGC CIRCUIT
IF	INTERMEDIATE FREQUENCY
IN SELA1	INPUT SELECT A1 POSITION
IN SELA2	INPUT SELECT A2 POSITION
IN SELA3	INPUT SELECT A3 POSITION
INS L/R [L]	INSERT Lch/Rch Ⓛ
INS. [H]	INSERT Ⓗ
INSEL A1	INPUT SELECT A1 POSITION
INSEL A2	INPUT SELECT A2 POSITION
INSERT	INSERT
INSERT [H]	INSERT Ⓗ
IO CS	INPUT/OUTPUT CHIP SELECT
JOG1	JOG1
JOG S3 LED/FOWRD	JOG LED/FORWARD LED
JOG/F. LED	JOG LED/FORWARD LED
JSB [H]	JSB Ⓗ
JST. CLCK	JUST CLOCK
JST. CLK	JUST CLOCK
JST. CLOCK	JUST CLOCK
L. OUT	Lch OUTPUT
L. CH [H]	Lch Ⓗ
L. CH [L]	Lch Ⓛ
LED (MAIN)	LED (MAIN)
LED (STEREO)	LED (STEREO)
LED (SUB)	LED (SUB)
LED CKL	LED SERIAL CLOCK
LED CKS	LED SERIAL CLOCK
LED DATA	LED SERIAL DATA
LINE IN 1 [L]	LINE INPUT 1 (L)
LINE IN 1 [R]	LINE INPUT 1 (R)
LINE IN 2 [L]	LINE INPUT 2 (L)
LINE IN 2 [R]	LINE INPUT 2 (R)
LINE IN V	LINE INPUT VIDEO
LINE IN [L]	LINE INPUT (L)
LINE IN [R]	LINE INPUT (R)
LINE OUT [L]	LINE OUTPUT (L)
LINE OUT [R]	LINE OUTPUT (R)
LP [H]	LP Ⓗ

LPTRI [L]	LP TRICK PLAY Ⓛ
Lch/A. DUB	Lch/AUDIO DUBBING
M GND	MOTOR GND
M REG	MOTOR REGULATOR
MAIN OUT	MAIN OUTPUT
MAIN [L]	MAIN Ⓛ
MAIN/MONO	MAIN/MONAURAL
MAX IN	MAXIMAM INPUT
MES [H]	MESECAM Ⓗ
MESE [H]	MESECAM Ⓗ
MESE [L]	MESECAM Ⓛ
METER 5V	LEVEL METER 5V
METER [L]	LEVEL METER (L)
METER [R]	LEVEL METER (R)
METER. L/AVS	LEVEL METER (L)
METER. R/AVC	LEVEL METER (R)
MI/BI [L]	MIX Ⓗ/BILIGUAL
MIC GND	MIC GND
MIC IN	MIC INPUT
MIC IN [L]	MIC INPUT (L)
MIC IN [R]	MIC INPUT (R)
MIC [H]	MIC Ⓗ
MIX [H]	MIX Ⓗ
MIX [H]/CINEMA [L]	MIX Ⓗ/CINEMA SOUND Ⓛ
MIX/CINE	MIX Ⓗ/CINEMA SOUND Ⓛ
MIX/CINEMA [L]	MIX Ⓗ/CINEMA SOUND Ⓛ
MN. H/M. L	MONAURAL Ⓗ/MAIN Ⓛ
MN. H/MAI. L	MONAURAL Ⓗ/MAIN Ⓛ
MN2/MES. L	MONAURAL 2/MESECAM Ⓛ
MODE SEL	AUDIO MODE SELECT
MODE SW	AUDIO MODE SW
MODE. S. IN	AUDIO MODE SELECT INPUT
MODE. S. OUT	AUDIO MODE SELECT OUTPUT
MONO [H]	MONAURAL Ⓗ
MONO [H]/MAIN [L]	MONAURAL Ⓗ/MAIN Ⓛ
MONO2 [L]	MONAURAL 2
MONO2/MESE [FM(L)]	MONAURAL 2/MESECAM (FM Ⓛ)
MOTOR GND	MOTOR GND
MUTE	MUTE
N. A. REC [L]	NORMAL AUDIO RECORDING
N. SW 12V	NON SW 12V
N. SW. 5. DET	NON SW 5V DETECT
NICAM	NICAM
NICAM [L]	NICAM Ⓛ
NOL [H]	PAL Ⓗ/4.43 NTSC Ⓜ/3.58 NTSC Ⓛ
NOR/SOFT [H]	NORMAL/SOFT TAPE PLAY Ⓗ
NORMAL [H]	NORMAL Ⓗ
NR BIAS	NR BIAS
NTSC [L]	NTSC Ⓛ
OCH	CONTROL AGC CIRCUIT
OUT	OUTPUT
P-OFF [H]	POWER OFF Ⓗ
P-OFF [L]	POWER OFF Ⓛ
P. FAIL	POWER FAILURE DETECT
P. OFF [H]	POWER OFF Ⓗ
P. OFF [L]	POWER OFF Ⓛ
PAL [H]	PAL Ⓗ
PAL [L]/NTSC [H]	PAL Ⓛ/NTSC Ⓗ
PB ADJ OUT	PLAYBACK ADJUST OUTPUT
PB OUT	PLAYBACK OUTPUT
PB. H	PLAYBACK Ⓗ
PFG	PG/FG
PHOTSN +B	PHOTO SENSOR +B
PICT. CNT	PICTURE CONTROL
PLAY LED/RVS LED	PLAY LED/REVERSE LED
PLAY. PO	PLAY POSITION
PLAY/R. LED	PLAY LED/REVERSE LED
PLY/DEW	PLAY/DEW Ⓗ
POWER OFF [L]	POWER OFF Ⓛ
PREROLL [H]	PREROLL Ⓗ
PWRFAIL	POWER FAILURE DETECT
R. CH [H]	Rch Ⓗ
R. CH [L]	Rch Ⓛ
R. ST	RESET
R/S/F	REVERSE Ⓗ/STOP Ⓜ/FORWARD Ⓛ
RCH [H]	Rch Ⓗ
REC 12V	RECORDING 12V
REC CHROMA	RECORDING CHROMINANCE SIGNAL
REC H	RECORDING Ⓗ
REC IN	RECORDING INPUT
REC OUT [L]	RECORDING OUTPUT Ⓛ
REC START	RECORDING START
REC VR [C]	RECORDING VOLUME (COMMON)
REC VR [L]	RECORDING VOLUME (L)
REC VR [R]	RECORDING VOLUME (R)
REC Y	RECORDING LUMINANCE SIGNAL
REC [H]	RECORDING Ⓗ
REC. C	RECORDING CHROMINANCE SIGNAL
REC. Y	RECORDING LUMINANCE SIGNAL
REC/EE CTL	RECORDING/EE CONTROL
REEL-T	REEL PULSE (TAKE-UP)
REEL-S	REEL PULSE (SUPPLY)
REGULATOR FILTER	REGULATOR FILTER
RESET	RESET
REV M F/R	REVIEW MOTOR FORWARD/REVERSE
REV M V1	REVIEW MOTOR V1
REV M V2	REVIEW MOTOR V2
REV MOTOR F/R	REVIEW MOTOR FORWARD/REVERSE
REV MOTOR V1	REVIEW MOROR V1
REV MOTOR V2	REVIEW MOTOR V2
REV MOTOR [+]	REVIEW MOTOR (+)
REV MOTOR [−]	REVIEW MOTOR (−)
REV. M. GND	REVIEW MOTOR GND
RF. CHROMA	RF CHROMINANCE SIGNAL
RF OUT	RF OUTPUT
RF Y	RF LUMINANCE SIGNAL
RF. Y. IN	RF LUMINANCE SIGNAL INPUT
RF. Y. OUT	RF LUMINANCE SIGNAL OUTPUT

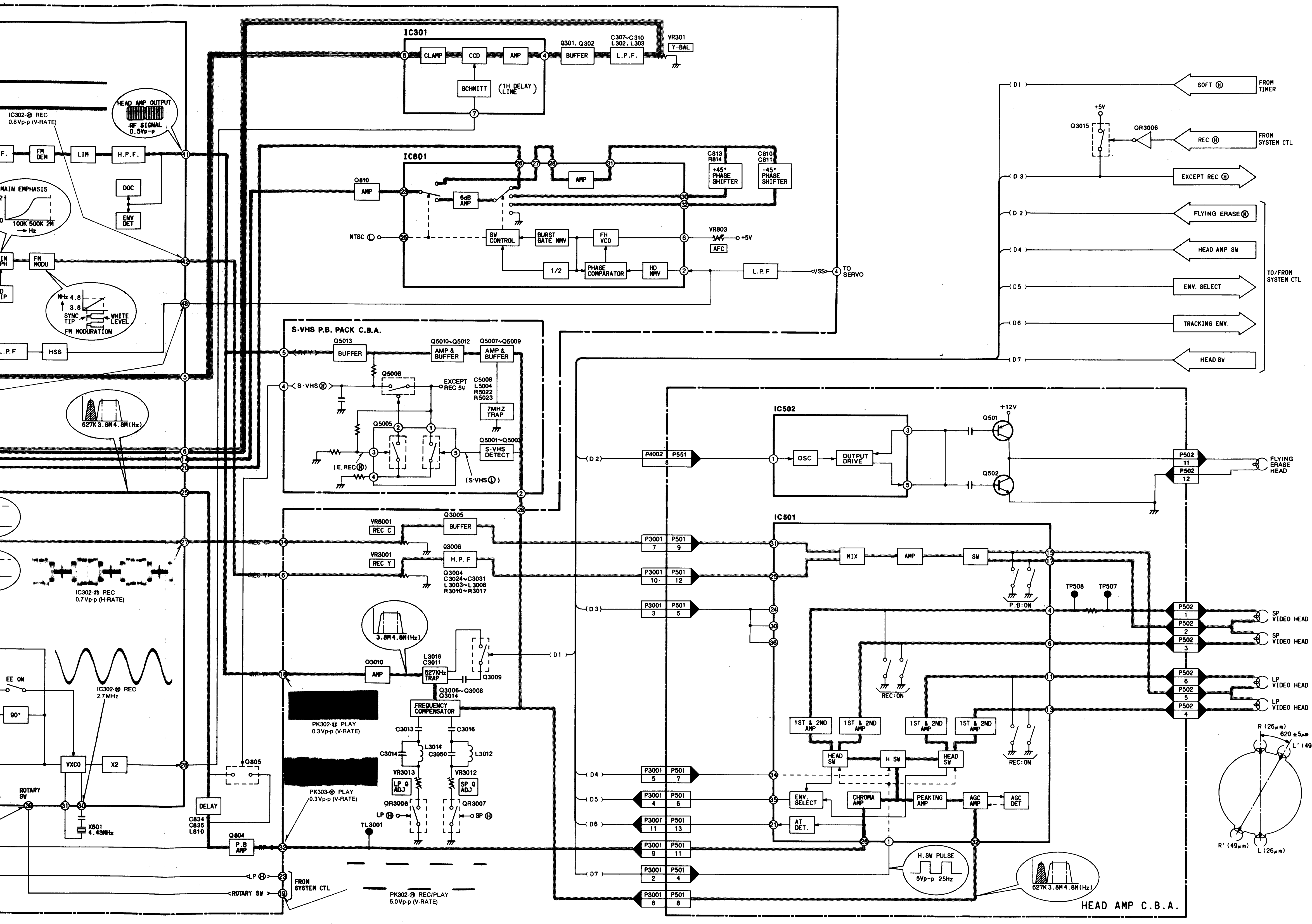
ROTAR. SW	ROTARY SW
ROTARY	ROTARY SW
RST	RESET
RST [L]	RESET Ⓛ
Rch/INST	Rch/INSERT
S IN	SERIAL DATA INPUT
S OUT	SERIAL DATA OUTPUT
S-PHOTO	SUPPLY PHOTO TRANSISTOR
S-RL. PLS	SUPPLY REEL PULSE
S. CLK	SERIAL CLOCK
S. CLK/AV	SERIAL CLOCK/AV
S. DATA	SERIAL DATA
S. DATA/A	SERIAL DATA
S. PHOTO	SUPPLY PHOTO TRANSISTOR
S. TAB [L]	SAFETY TAB SW ON Ⓛ
S/P/N	SECAM/PAL/NTSC
SC IN	SERIAL CLOCK INPUT
SC OUT	SERIAL CLOCK OUTPUT
SCK SELECT	SERIAL CLOCK SELECT
SEL OUT [L]	SELECT OUTPUT (L)
SEL OUT [R]	SELECT OUTPUT (R)
SHUTTLE 1	SHUTTLE 1
SIF	SOUND INTERMEDIATE FREQUENCY
SLMUT [H]	INPUT SELECT MUTE Ⓗ
SLNID [+]	SOLENOID (+)
SLNID [−]	SOLENOID (−)
SLW TR. MM	SLOW TRACKING MONO MULTI
SLW TR. REF	SLOW TRACKING REFERENCE VOLTAGE
SNS. GND	SENSOR GND
SOFT [H]	SOFT TAPE PLAY Ⓗ
SOFT [H]/NORMAL	SOFT TAPE PLAY Ⓗ/NORMAL Ⓗ
SOLENOID ON [L]	SOLENOID ON Ⓛ
SP [H]	SP Ⓗ
SP/L/SLP	SP/LP
SSS [L]	SLOW/STILL/STOP
STEREO LED	STEREO LED
STEREO [H]	STEREO Ⓗ
STEREO [L]	STEREO Ⓛ
STOP. PO	STOP POSITION
STOP/5V	STOP POSITION/5V
STOP1/TAPE SEL	STOP1 POSITION/TAPE SELECT
STOP1/PAL:ST	STOP1 POSITION/PAL
STOP2. PO	STOP 2 POSITION
STOP2/S-TAB	STOP 2 POSITION/SAFETY TAB SW
STREO [H]	STEREO Ⓗ
SUB BIAS	SUB BIAS
SUB. SW	SUB SW
SVHS CAS [L]	S-VHS CASSETTE Ⓛ
SW. 5. DET	SW 5V DETECT
SYNC [L]	SYNC Ⓛ
SYSCON 5V	SYSTEM CONTROL 5V
SYSTEM	SYSTEM SW
T-PHOTO	TAKE-UP PHOTO TRANSISTOR
T-RL. PLS	TAKE-UP REEL PULSE
T. BUSCLK	TIMER BUS CLOCK
T. BUSLSN	TIMER BUS LISTEN
T. BUSTLK	TIMER BUS TALK
T. END [L]	TAPE END Ⓛ
T. PHOTO	TAKE-UP PHOTO TRANSISTOR
TAPE END [L]	TAPE END Ⓛ
TAPE END [L]/CAM	TAPE END Ⓛ/CAMERA PAUSE
TEST	TEST MODE
TPZ	TRAPEZOIDAL WAVE CIRCUIT
TRIC [L]	TRIC PLAY Ⓛ
TRICK [L]	TRIC PLAY Ⓛ
TRK. ENV	AUTO TRACKING ENVELOPE DETECT
TU. AUDIO	TUNER AUDIO
TU. GND	TUNER GND
TU. V. IN	TUNER VIDEO SIGNAL INPUT
TU. VIDEO	TUNER VIDEO
TUN NOR IN	TUNER NORMAL INPUT
TUN R	TUNER AUDIO (R)
TUN. AUDIO IN	TUNER AUDIO INPUT
TUNER 12V	TUNER 12V
TUNER L	TUNER AUDIO (L)
TUNER V IN	TUNER VIDEO SIGNAL INPUT
TUNER [L]	TUNER AUDIO (L)
TUNER [N]	TUNER AUDIO (NORMAL)
TUNER [R]	TUNER AUDIO (R)
TUNER. 12	TUNER 12V
TUOFF [H]	TUNER OFF Ⓗ
TV. AUDIO	TV AUDIO
TV/VTR	TV/VTR
TXTON [L]	TEXT ON Ⓛ
U. REG45V	UNREGULATOR 45V
UNREG	UNREGULATOR
UNREG19V	UNREGULATOR 19V
V. REF	REFERENCE VOLTAGE
V. EE [H]	VIDEO EE Ⓗ
V. EE [L]	VIDEO EE Ⓛ
VCO REF	RERERENCE OSCILLATER
VD. IN	VIDEO SIGNAL INPUT
VD. OUT	VIDEO SIGNAL OUTPUT
VIDEO EE [L]	VIDEO EE Ⓛ
VIDEO IN	VIDEO SIGNAL INPUT
VIDEO OUT	VIDEO SIGNAL OUTPUT
VM	MOTOR VOLTAGE
VM DOWN [L]	MOTOR VOLTAGE DOWN Ⓛ
VSS	VERTICAL SYNC SIGNAL
VTR [H]	VTR Ⓗ
VTR. 12V	VTR 12V
X IN	OSCILLATOR INPUT
X OUT	OSCILLATOR OUTPUT

3-2. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

MAIN SIGNAL PATH IN REC MODE — MAIN SIGNAL PATH IN PLAYBACK MODE

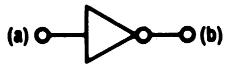

FRONT INPUT C.B.A
INPUT/OUTPUT PACK C.B.A
FRONT VIDEO IN (AV3)
P4801
P3901
AV2 (21PIN)
AV1 (21PIN)
IC3901
INPUT SELECTOR
LOGIC
TUNER VIDEO
FROM TUNER
INPUT SEL
A B C
19 PIN
L L L TUNER
H L L AV 1
L H L AV 2
H L H AV 3
AF
AE
EE
VTR
CANAL
INS A
INS B
INS C
FROM SYSTEM CONTROL
TEST
ON OFF
+12V
IC3902
SIGNAL GEN
OSC
X3901
FL3901
L.P.F
TO RF CONVERTER
VIDEO OUT
Q3901
TEST SIG.
IC3902-④ REC/PLAY 0.2Vp-p (V-RATE)
IC3902-⑤ REC/PLAY 0.14Vp-p (V-RATE)
PS3952-⑳ REC/PLAY 1.1Vp-p (H-RATE)
TL3002
Q3001
AMP
(dB)
VIDEO SIGNAL 4 4.43MHz
IC302-⑩ REC/PLAY 1.0Vp-p (H-RATE)
VR C.B.A
REG 5V
VR6512
PICTURE VR
P6511
P4004
FROM SYSTEM CTL
ART V.SYNC
EE Ⓗ
QR807
IC302
LOGIC
EE Ⓗ
IC302-⑫ REC/PLAY 2.4Vp-p (H-RATE)
VIDEO IN
AMP
MUTE
CLAMP
CLP
AGC
DET
MIX
PULSE
EE
VV
EE ON
LUMINANCE SIGNAL
4MHz
L.P.F.
(dB)
4MHz 4.43MHz
AMP
NL DE
DOC
YNR
CLP
Y/C MIX
NC2
PIC CONT
NC
LIM
H.P.F.
AMP
L.P.F
HSS
NLDE
NLE
MAIN EMPH
W/D CLIP
FM MODU
MAIN EMPHASIS
dB 12
0
100K 500K 2M → Hz
MHz 4.8
3.8
SYNC TIP
WHITE LEVEL
FM MODURATION
L306
C323
R324
R323
+5V
QR306
C324
R322
QR304
PLAY Ⓛ
SP Ⓗ
LP Ⓗ
L.P.F.
FM DEM
LIM
H.P.F.
DOC
ENV DET
HEAD AMP OUTPUT
RF SIGNAL 0.5Vp-p
IC302-㊸ REC 0.8Vp-p (V-RATE)
IC302-⑤ REC/PLAY 4.8Vp-p (H-RATE)
627K 3.8M 4.8M (Hz)
EDIT
CNR
4.43MHz
4.43MHz B.P.F.
630KHz B.P.F.
627KHz
630KHz L.P.F.
630KHz
IC302-㉗ REC 0.7Vp-p (H-RATE)
COMB AMP
ACC
MAIN B.M
0.16Vp-p 5.06MHz
5.06MHz B.P.F.
5.06MHz
EE
LP
SP
SUB B.M
SUB B.M
ROTARY
DIGITAL M.M
VCO
AFC
DET
SIDE LOCK
DET
KILL
ID
90°
APC DET
VXCO
X2
EE ON
IC302-㉚ REC 2.7MHz
ACC DET
B.GENE
BGP
CNR
IC801
DL802
1H DELAY LINE
2H DELAY LINE
LOGIC
FROM SYSTEM CTL
NTSC Ⓛ
IC302-㉓ REC/PLAY 0.9Vp-p (H-RATE)
FROM TIMER
PAL Ⓗ
5V
QR801
QR303
MESECAM Ⓗ
PAL Ⓗ NTSC Ⓛ
FROM SYSTEM CTL
ROTARY SW
5V
Q802
Q303
AMP
AMP
DL801
1H DELAY LINE
VR802
CHROMA PHASE
VR801
CHROMA BALANCE
QR803
FROM TIMER
MESECAM Ⓗ
IC302-⑲ PLAY 0.9Vp-p (H-RATE)
IC302-⑱ PLAY 0.5Vp-p (V-RATE)
LP Ⓗ
ROTARY SW
X801 4.43MHz
QR805
IC302-㊱ REC/PLAY 5.0Vp-p (V-RATE)
DELAY
C834
C835
L810
Q805
Q804
P.B AMP
LP Ⓗ
ROTARY SW
LUMINANCE & CHROMINANCE PACK C.B.A.

BACK MODE


IC301
CLAMP
CCD
AMP
SCHMITT
(1H DELAY LINE)
Q301, Q302
BUFFER
C307~C310
L302, L303
L.P.F.
VR301
Y-BAL
HEAD AMP OUTPUT
RF SIGNAL
0.5Vp-p
IC302-㊷ REC
0.8Vp-p (V-RATE)
F.
FM DEM
LIM
H.P.F.
DOC
ENV DET
MAIN EMPHASIS
100K 500K 2M
Hz
IN PH
FM MODU
D IP
MHz 4.8
3.8
SYNC TIP
WHITE LEVEL
FM MODURATION
L.P.F
HSS
627K 3.8M 4.8M(Hz)
IC801
Q810
AMP
6dB AMP
NTSC Ⓛ
SW CONTROL
BURST GATE MMV
FH VCO
1/2
PHASE COMPARATOR
HD MMV
C813
R814
+45° PHASE SHIFTER
C810
C811
-45° PHASE SHIFTER
VR803
+5V
AFC
L.P.F
VSS
TO SERVO
S-VHS P.B. PACK C.B.A.
Q5013
BUFFER
Q5010~Q5012
AMP & BUFFER
Q5007~Q5009
AMP & BUFFER
RF-Y
S-VHS Ⓗ
Q5006
EXCEPT REC 5V
C5009
L5004
R5022
R5023
7MHZ TRAP
Q5005
Q5001~Q5003
S-VHS DETECT
(E.REC Ⓗ)
(S-VHS Ⓛ)
IC302-㉗ REC
0.7Vp-p (H-RATE)
EE ON
90°
IC302-㉚ REC
2.7MHz
VXCO
X2
ROTARY SW
X801
4.43MHz
C834
C835
L810
DELAY
Q805
Q804
P.B AMP
VR8001
REC C
Q3005
BUFFER
VR3001
REC Y
Q3006
H. P. F
Q3004
C3024~C3031
L3003~L3008
R3010~R3017
REC C
REC Y
3.8M 4.8M(Hz)
Q3010
AMP
L3016
C3011
627KHz TRAP
Q3009
RF Y
Q3006~Q3008
Q3014
FREQUENCY COMPENSATOR
PK302-⑲ PLAY
0.3Vp-p (V-RATE)
PK303-㉜ PLAY
0.3Vp-p (V-RATE)
C3013
C3016
C3014
L3014
C3050
L3012
VR3013
LP Q ADJ
VR3012
SP Q ADJ
QR3006
QR3007
LP Ⓗ
SP Ⓗ
TL3001
LP Ⓗ
ROTARY SW
FROM SYSTEM CTL
PK302-⑲ REC/PLAY
5.0Vp-p (V-RATE)
D1
SOFT Ⓗ
FROM TIMER
+5V
Q3015
QR3006
REC Ⓗ
FROM SYSTEM CTL
D3
EXCEPT REC Ⓗ
D2
FLYING ERASE Ⓗ
D4
HEAD AMP SW
D5
ENV. SELECT
D6
TRACKING ENV.
D7
HEAD SW
TO/FROM SYSTEM CTL
IC502
OSC
OUTPUT DRIVE
+12V
Q501
Q502
P4002
P551
P502
FLYING ERASE HEAD
IC501
P3001
P501
MIX
AMP
SW
P.B:ON
TP508
TP507
SP VIDEO HEAD L'
SP VIDEO HEAD R'
LP VIDEO HEAD R
LP VIDEO HEAD L
REC:ON
1ST & 2ND AMP
HEAD SW
H SW
ENV. SELECT
CHROMA AMP
PEAKING AMP
AGC AMP
AGC DET
AT DET.
H.SW PULSE
5Vp-p 25Hz
627K 3.8M 4.8M(Hz)
R (26μm)
620 ±5μm
L' (49μm)
R' (49μm)
L (26μm)
HEAD AMP C.B.A.

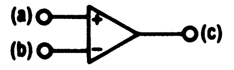
SYMBOL — **TRUTH VALUE TABLE**

INVERTER



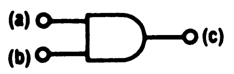
IN	(a)	H	L
OUT	(b)	L	H

COMPARTOR



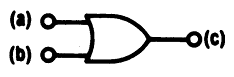
IN	(a) (b)	(a) > (b)	(a) < (b)
OUT	(c)	H	L

AND CIRCUIT



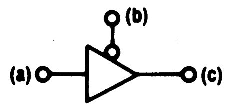
IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	L	L	H

OR CIRCUIT



IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	H	H	H

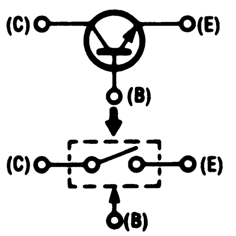
THREE STATES BUFFER



IN	(a)	H	L	H or L
	(b)	L	L	H
OUT	(c)	H	L	※

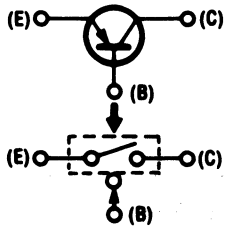
※ High impedance

TR. SW (NPN TYPE)



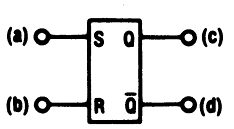
BASE	H	L
TR. SW	ON	OFF

TR. SW (PNP TYPE)



BASE	H	L
TR. SW	OFF	ON

R-S TYPE FLIP-FLOP



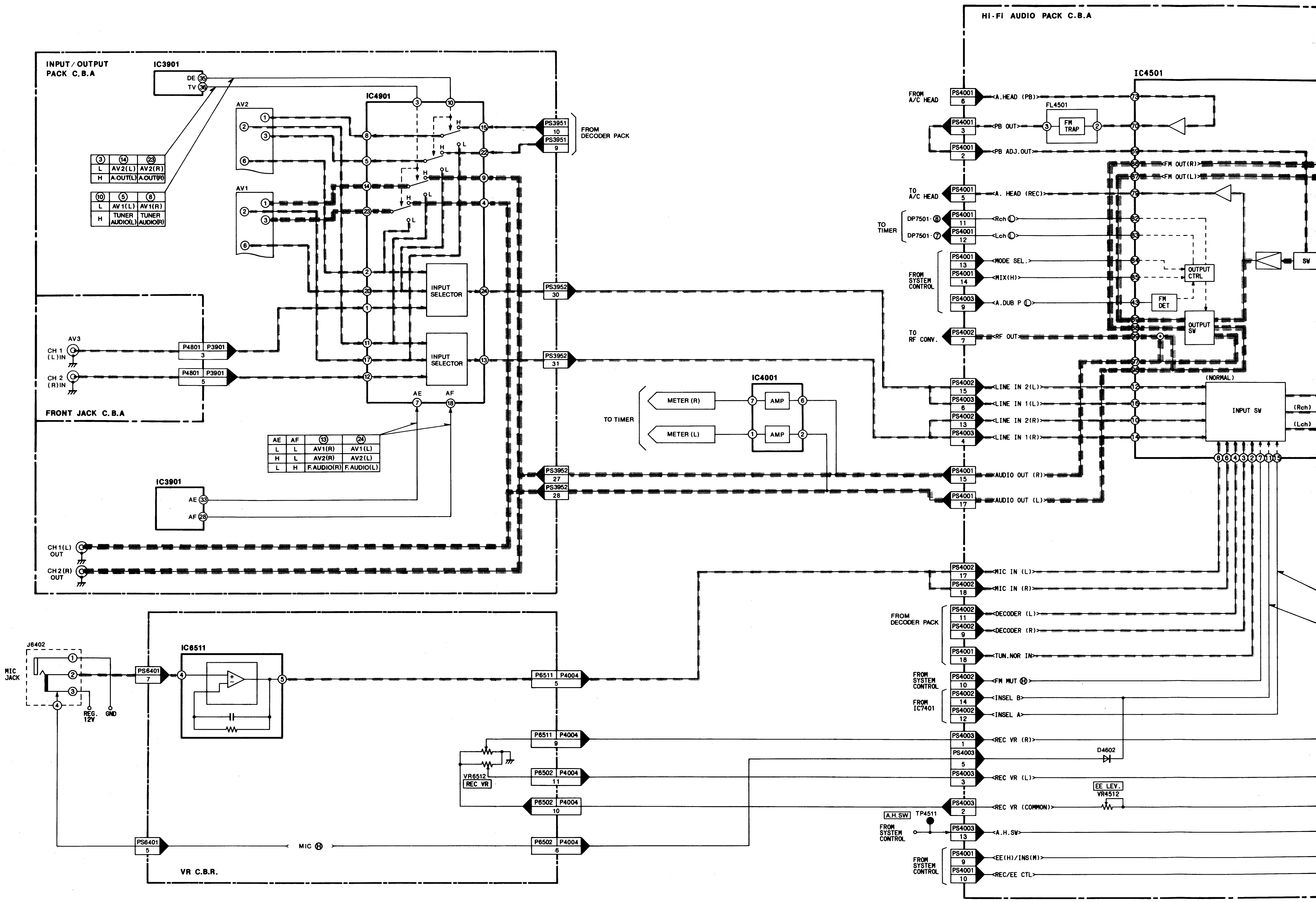
IN	(a)	L	L	⎍
	(b)	L	⎍	L
OUT	(c)	※	L	H
	(d)	◆	H	L

※ Initial condition is maintained.
◆ Initial condition is reversed.

3-3. Hi-Fi AUDIO BLOCK DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

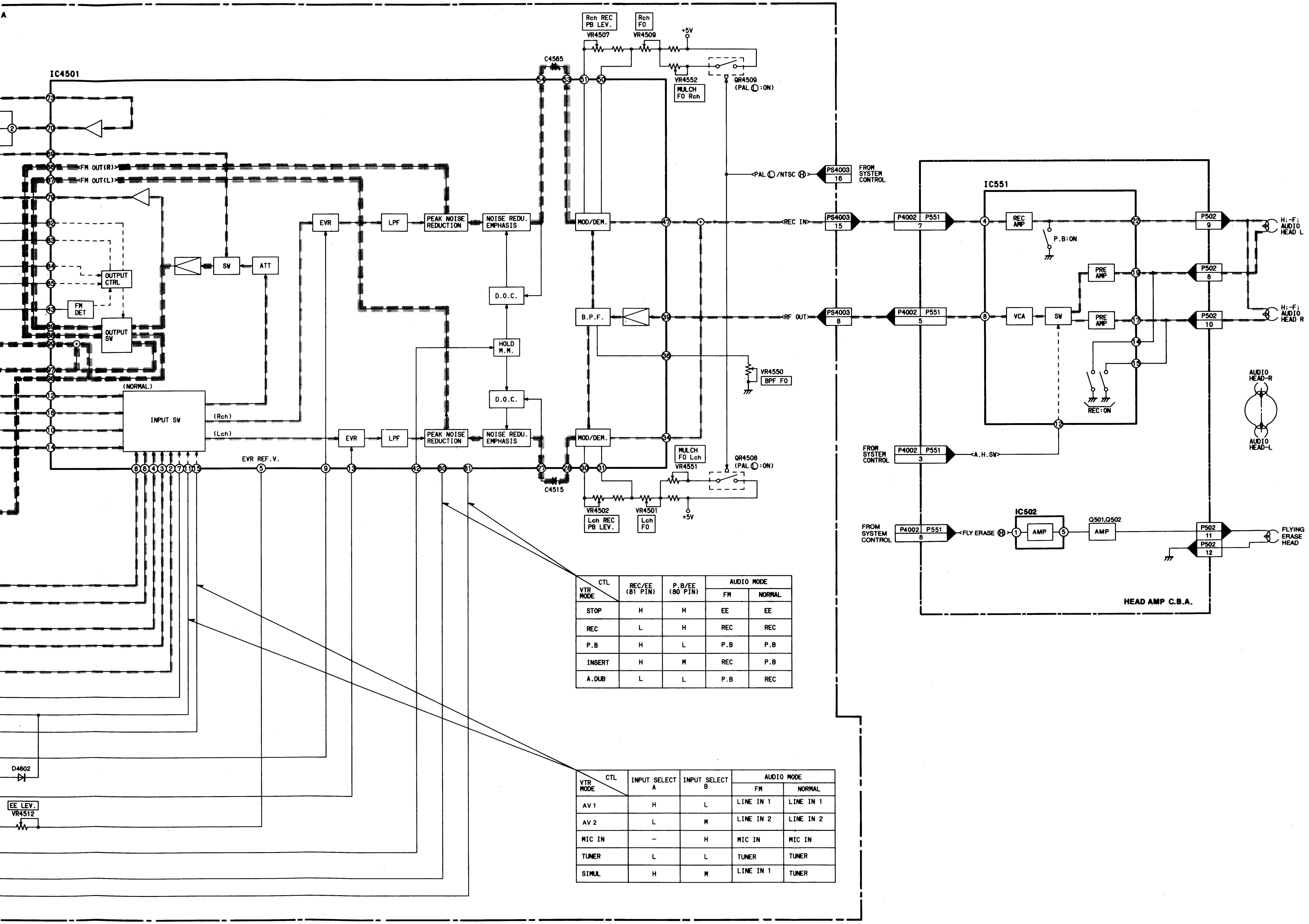

INPUT/OUTPUT PACK C.B.A
IC3901
DE 35
TV 36
IC4901
AV2
AV1
INPUT SELECTOR
INPUT SELECTOR
AE
AF
PS3951 10
PS3951 9
FROM DECODER PACK
PS3952 30
PS3952 31
PS3952 27
PS3952 28
AV3
CH 1 (L) IN
CH 2 (R) IN
P4801 P3901 3
P4801 P3901 5
FRONT JACK C.B.A
IC3901
AE 33
AF 28
CH 1 (L) OUT
CH 2 (R) OUT
J6402
MIC JACK
REG. 12V
GND
PS6401 7
IC6511
P6511 P4004 5
P6511 P4004 9
VR6512
REC VR
P6502 P4004 11
P6502 P4004 10
PS6401 5
MIC Ⓗ
P6502 P4004 6
VR C.B.R.
TO TIMER
METER (R)
METER (L)
IC4001
AMP
AMP
HI-FI AUDIO PACK C.B.A
IC4501
FROM A/C HEAD
PS4001 6
<A.HEAD (PB)>
FL4501
FM TRAP
PS4001 3
<PB OUT>
PS4001 2
<PB ADJ.OUT>
<FM OUT(R)>
<FM OUT(L)>
TO A/C HEAD
PS4001 5
<A. HEAD (REC)>
TO TIMER
DP7501-8
DP7501-7
PS4001 11
<Rch Ⓛ>
PS4001 12
<Lch Ⓛ>
FROM SYSTEM CONTROL
PS4001 13
<MODE SEL.>
PS4001 14
<MIX(H)>
PS4003 9
<A.DUB P Ⓛ>
OUTPUT CTRL
FM DET
OUTPUT SW
SW
TO RF CONV.
PS4002 7
<RF OUT>
(NORMAL)
INPUT SW
(Rch)
(Lch)
PS4002 15
<LINE IN 2(L)>
PS4003 6
<LINE IN 1(L)>
PS4002 13
<LINE IN 2(R)>
PS4003 4
<LINE IN 1(R)>
PS4001 15
<AUDIO OUT (R)>
PS4001 17
<AUDIO OUT (L)>
PS4002 17
<MIC IN (L)>
PS4002 18
<MIC IN (R)>
FROM DECODER PACK
PS4002 11
<DECODER (L)>
PS4002 9
<DECODER (R)>
PS4001 18
<TUN.NOR IN>
FROM SYSTEM CONTROL
PS4002 10
<FM MUT Ⓗ>
FROM IC7401
PS4002 14
<INSEL B>
PS4002 12
<INSEL A>
PS4003 1
<REC VR (R)>
PS4003 5
D4602
PS4003 3
<REC VR (L)>
EE LEV.
VR4512
PS4003 2
<REC VR (COMMON)>
A.H.SW
TP4511
FROM SYSTEM CONTROL
PS4003 13
<A.H.SW>
FROM SYSTEM CONTROL
PS4001 9
<EE(H)/INS(M)>
PS4001 10
<REC/EE CTL>

③	⑭	㉓
L	AV2(L)	AV2(R)
H	A.OUT(L)	A.OUT(R)

⑩	⑤	⑧
L	AV1(L)	AV1(R)
H	TUNER AUDIO(L)	TUNER AUDIO(R)

AE	AF	⑬	㉔
L	L	AV1(R)	AV1(L)
H	L	AV2(R)	AV2(L)
L	H	F.AUDIO(R)	F.AUDIO(L)

L PATH IN PLAYBACK MODE

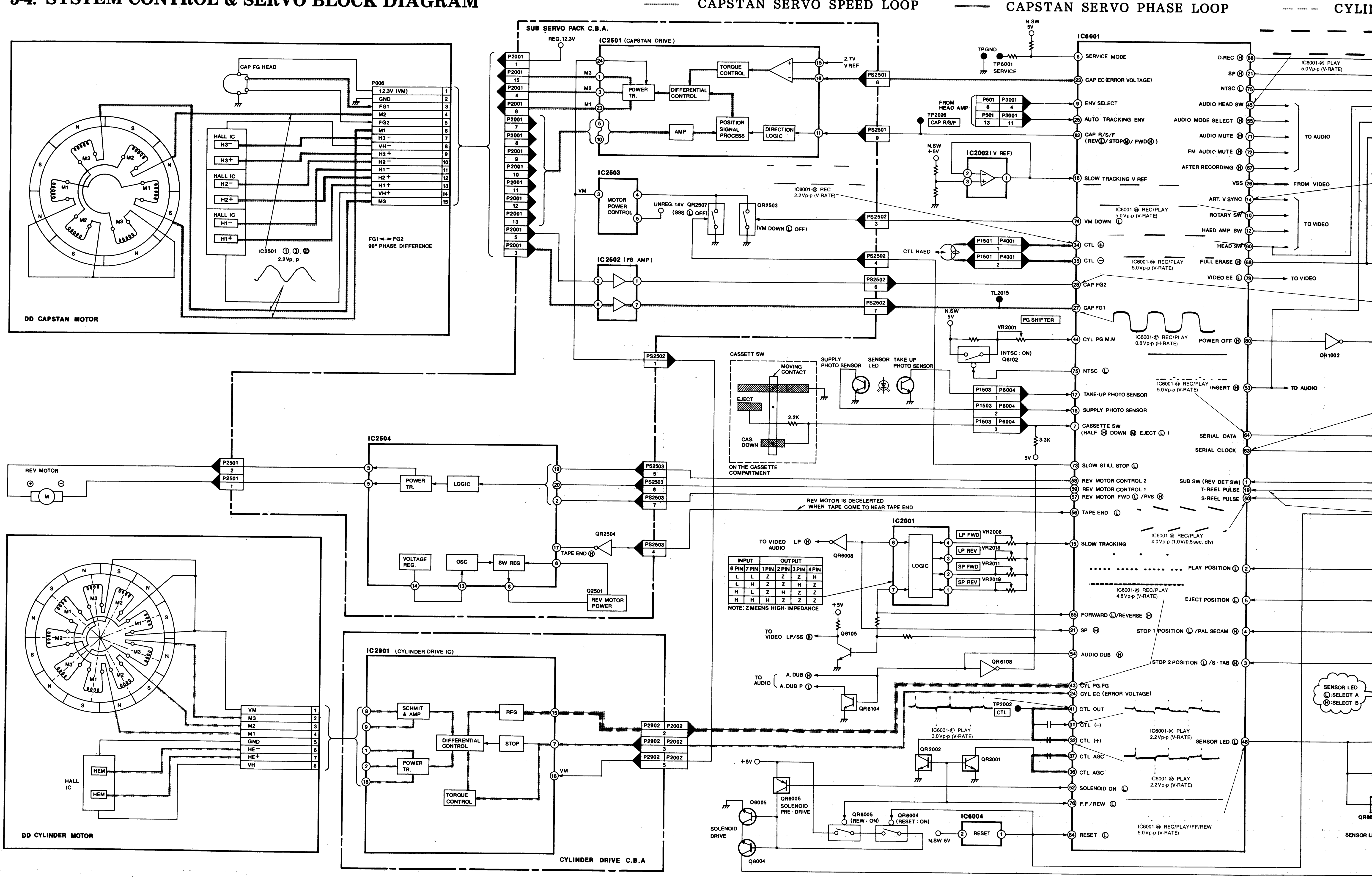


A
IC4501
<FM OUT(R)>
<FM OUT(L)>
OUTPUT CTRL
FM DET
OUTPUT SW
SW
ATT
(NORMAL)
INPUT SW
(Rch)
(Lch)
EVR REF.V.
EVR
LPF
PEAK NOISE REDUCTION
NOISE REDU. EMPHASIS
D.O.C.
HOLD M.M.
C4565
C4515
Rch REC PB LEV.
VR4507
Rch FO
VR4509
+5V
VR4552
MULCH FO Rch
QR4509 (PAL Ⓛ:ON)
MOD/DEM.
B.P.F.
VR4550
BPF FO
MULCH FO Lch
VR4551
QR4508 (PAL Ⓛ:ON)
VR4502
Lch REC PB LEV.
VR4501
Lch FO
<PAL Ⓛ/NTSC Ⓗ>
PS4003 16
FROM SYSTEM CONTROL
<REC IN>
PS4003 15
<RF OUT>
PS4003 8
P4002 P551 7
P4002 P551 5
P4002 P551 3
P4002 P551 8
IC551
REC AMP
P.B:ON
PRE AMP
VCA
SW
REC:ON
<A.H.SW>
<FLY ERASE Ⓗ>
IC502
AMP
Q501,Q502
P502 9
P502 8
P502 10
P502 11
P502 12
Hi-Fi AUDIO HEAD L
Hi-Fi AUDIO HEAD R
AUDIO HEAD-R
AUDIO HEAD-L
FLYING ERASE HEAD
HEAD AMP C.B.A.
D4602
EE LEV.
VR4512

CTL / VTR MODE	REC/EE (81 PIN)	P.B/EE (80 PIN)	AUDIO MODE	
			FM	NORMAL
STOP	H	H	EE	EE
REC	L	H	REC	REC
P.B	H	L	P.B	P.B
INSERT	H	M	REC	P.B
A.DUB	L	L	P.B	REC

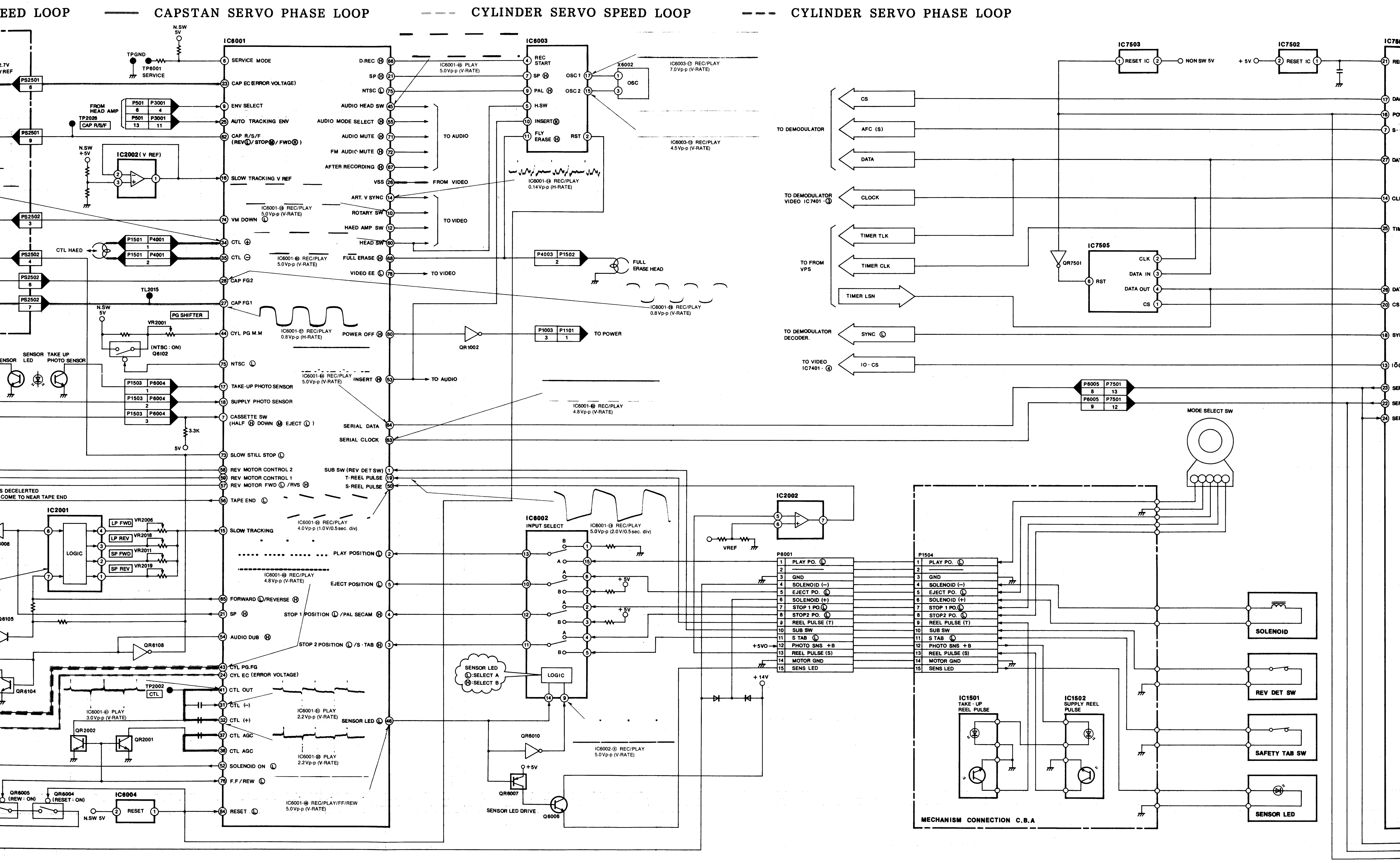
CTL / VTR MODE	INPUT SELECT A	INPUT SELECT B	AUDIO MODE	
			FM	NORMAL
AV 1	H	L	LINE IN 1	LINE IN 1
AV 2	L	M	LINE IN 2	LINE IN 2
MIC IN	–	H	MIC IN	MIC IN
TUNER	L	L	TUNER	TUNER
SIMUL	H	M	LINE IN 1	TUNER

3-4. SYSTEM CONTROL & SERVO BLOCK DIAGRAM

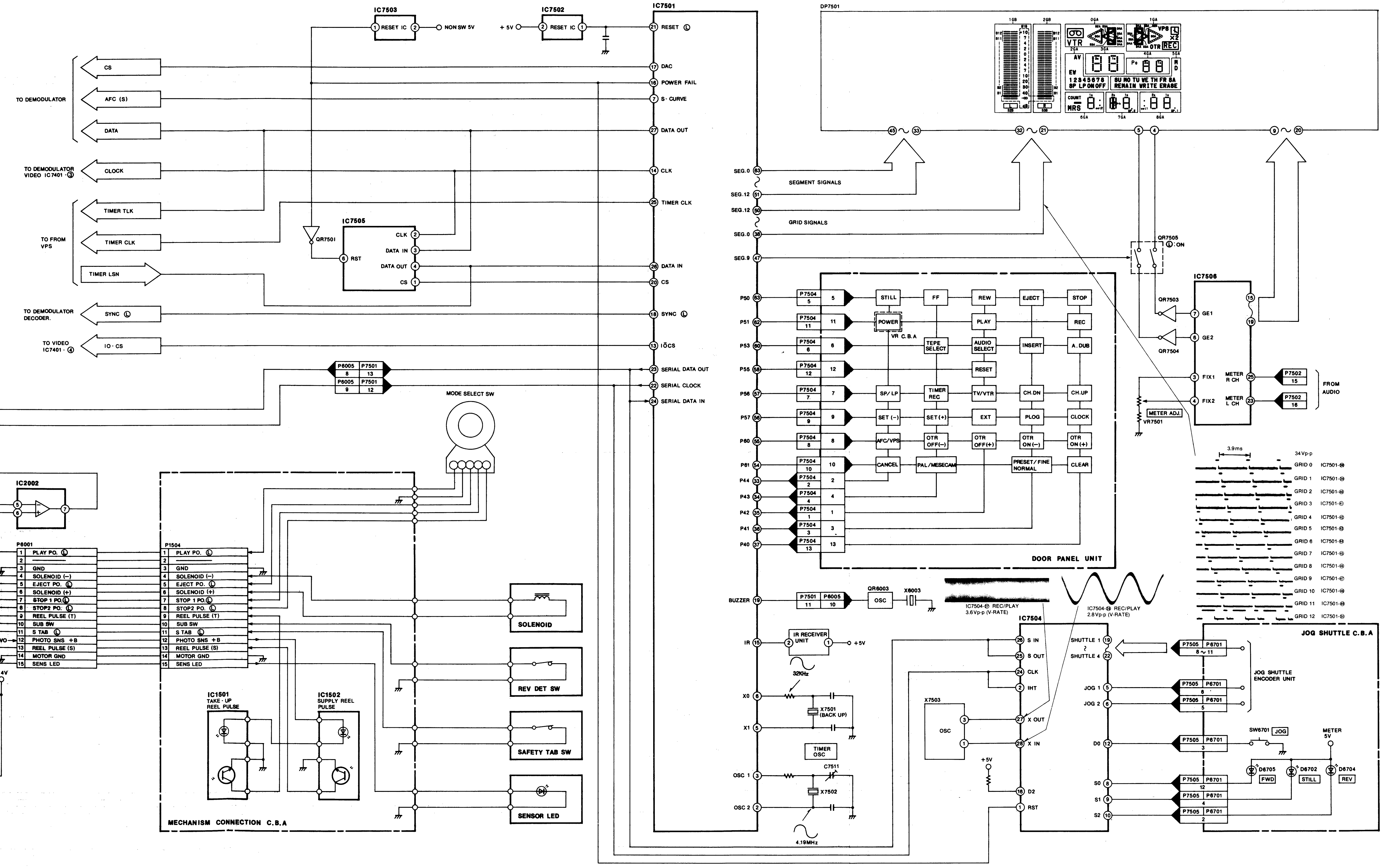

CAPSTAN SERVO SPEED LOOP
CAPSTAN SERVO PHASE LOOP
CYLI
SUB SERVO PACK C.B.A.
REG. 12.3V
IC2501 (CAPSTAN DRIVE)
TORQUE CONTROL
DIFFERENTIAL CONTROL
POWER TR.
POSITION SIGNAL PROCESS
DIRECTION LOGIC
AMP
2.7V VREF
M3
M2
M1
CAP FG HEAD
P006
12.3V (VM)
GND
FG1
M2
FG2
M1
H3−
VH−
H3+
H2−
H1−
H2+
H1+
VH+
M3
HALL IC
H3−
H3+
H2−
H2+
H1−
H1+
IC2501 ①.③.㉓
2.2Vp.p
FG1◄─►FG2
90° PHASE DIFFERENCE
DD CAPSTAN MOTOR
P2001
PS2501
PS2502
PS2503
IC2503
MOTOR POWER CONTROL
VM
UNREG. 14V QR2507
(SSS Ⓛ OFF)
QR2503
(VM DOWN Ⓛ OFF)
IC2502 (FG AMP)
IC6001-㊹ REC
2.2Vp-p (V-RATE)
CTL HAED
TL2015
N.SW 5V
PG SHIFTER
VR2001
(NTSC : ON)
Q6102
TPGND
TP6001 SERVICE
FROM HEAD AMP
P501 P3001
TP2026
CAP R/S/F
IC2002 (V REF)
N.SW +5V
P1501 P4001
CASSETT SW
MOVING CONTACT
EJECT
CAS. DOWN
2.2K
ON THE CASSETTE COMPARTMENT
SUPPLY PHOTO SENSOR
SENSOR LED
TAKE UP PHOTO SENSOR
P1503 P6004
3.3K
5V
REV MOTOR
P2501
IC2504
POWER TR.
LOGIC
VOLTAGE REG.
OSC
SW REG
QR2504
TAPE END Ⓗ
Q2501
REV MOTOR POWER
REV MOTOR IS DECELERTED WHEN TAPE COME TO NEAR TAPE END
IC2001
LOGIC
LP FWD
LP REV
SP FWD
SP REV
VR2006
VR2018
VR2011
VR2019
TO VIDEO AUDIO LP Ⓗ
QR6008
+5V
Q6105
TO VIDEO LP/SS Ⓗ
QR6108
TO AUDIO A.DUB Ⓗ
A.DUB P Ⓛ
QR6104
DD CYLINDER MOTOR
VM
M3
M2
M1
GND
HE−
HE+
VH
HALL IC
HEM
IC2901 (CYLINDER DRIVE IC)
SCHMIT & AMP
RFG
DIFFERENTIAL CONTROL
STOP
POWER TR.
TORQUE CONTROL
CYLINDER DRIVE C.B.A
P2902 P2002
TP2002
CTL
IC6001-㉔ PLAY
3.0Vp-p (V-RATE)
QR2002
QR2001
+5V
Q6005
QR6006 SOLENOID PRE-DRIVE
SOLENOID DRIVE
Q6004
QR6005 (REW : ON)
QR6004 (RESET : ON)
IC6004
RESET
N.SW 5V
IC6001
SERVICE MODE
CAP EC (ERROR VOLTAGE)
ENV SELECT
AUTO TRACKING ENV
CAP R/S/F (REVⓁ/STOPⓂ/FWDⒽ)
SLOW TRACKING V REF
VM DOWN Ⓛ
CTL ⊕
CTL ⊖
CAP FG2
CAP FG1
CYL PG M.M
NTSC Ⓛ
TAKE-UP PHOTO SENSOR
SUPPLY PHOTO SENSOR
CASSETTE SW (HALF Ⓗ DOWN Ⓜ EJECT Ⓛ)
SLOW STILL STOP Ⓛ
REV MOTOR CONTROL 2
REV MOTOR CONTROL 1
REV MOTOR FWD Ⓛ/RVS Ⓗ
TAPE END Ⓛ
SLOW TRACKING
FORWARD Ⓛ/REVERSE Ⓗ
SP Ⓗ
AUDIO DUB Ⓗ
CYL PG.FG
CYL EC (ERROR VOLTAGE)
CTL OUT
CTL (−)
CTL (+)
CTL AGC
CTL AGC
SOLENOID ON Ⓛ
F.F/REW Ⓛ
RESET Ⓛ
IC6001-㉓ REC/PLAY
5.0Vp-p (V-RATE)
IC6001-㉗ REC/PLAY
0.8Vp-p (H-RATE)
IC6001-㊿ REC/PLAY
4.0Vp-p (1.0V/0.5sec. div)
IC6001-⑤ REC/PLAY
4.8Vp-p (V-RATE)
IC6001-㉛ PLAY
2.2Vp-p (V-RATE)
IC6001-㉜ PLAY
2.2Vp-p (V-RATE)
IC6001-㊾ REC/PLAY/FF/REW
5.0Vp-p (V-RATE)
D.REC Ⓗ
SP Ⓗ
NTSC Ⓛ
AUDIO HEAD SW
AUDIO MODE SELECT Ⓗ
AUDIO MUTE Ⓗ
FM AUDIO MUTE Ⓗ
AFTER RECORDING Ⓗ
VSS
ART. V SYNC
ROTARY SW
HAED AMP SW
HEAD SW
FULL ERASE Ⓗ
VIDEO EE Ⓛ
POWER OFF Ⓗ
INSERT Ⓗ
SERIAL DATA
SERIAL CLOCK
SUB SW (REV DET SW)
T-REEL PULSE
S-REEL PULSE
PLAY POSITION Ⓛ
EJECT POSITION Ⓛ
STOP 1 POSITION Ⓛ /PAL SECAM Ⓗ
STOP 2 POSITION Ⓛ /S-TAB Ⓗ
SENSOR LED Ⓛ
IC6001-㊻ PLAY
5.0Vp-p (V-RATE)
TO AUDIO
FROM VIDEO
TO VIDEO
QR1002
SENSOR LED
Ⓛ:SELECT A
Ⓗ:SELECT B
QR60
SENSOR L

INPUT		OUTPUT			
6 PIN	7 PIN	1 PIN	2 PIN	3 PIN	4 PIN
L	L	Z	Z	Z	H
L	H	Z	Z	H	Z
H	L	Z	H	Z	Z
H	H	H	Z	Z	Z

NOTE: Z MEENS HIGH-IMPEDANCE

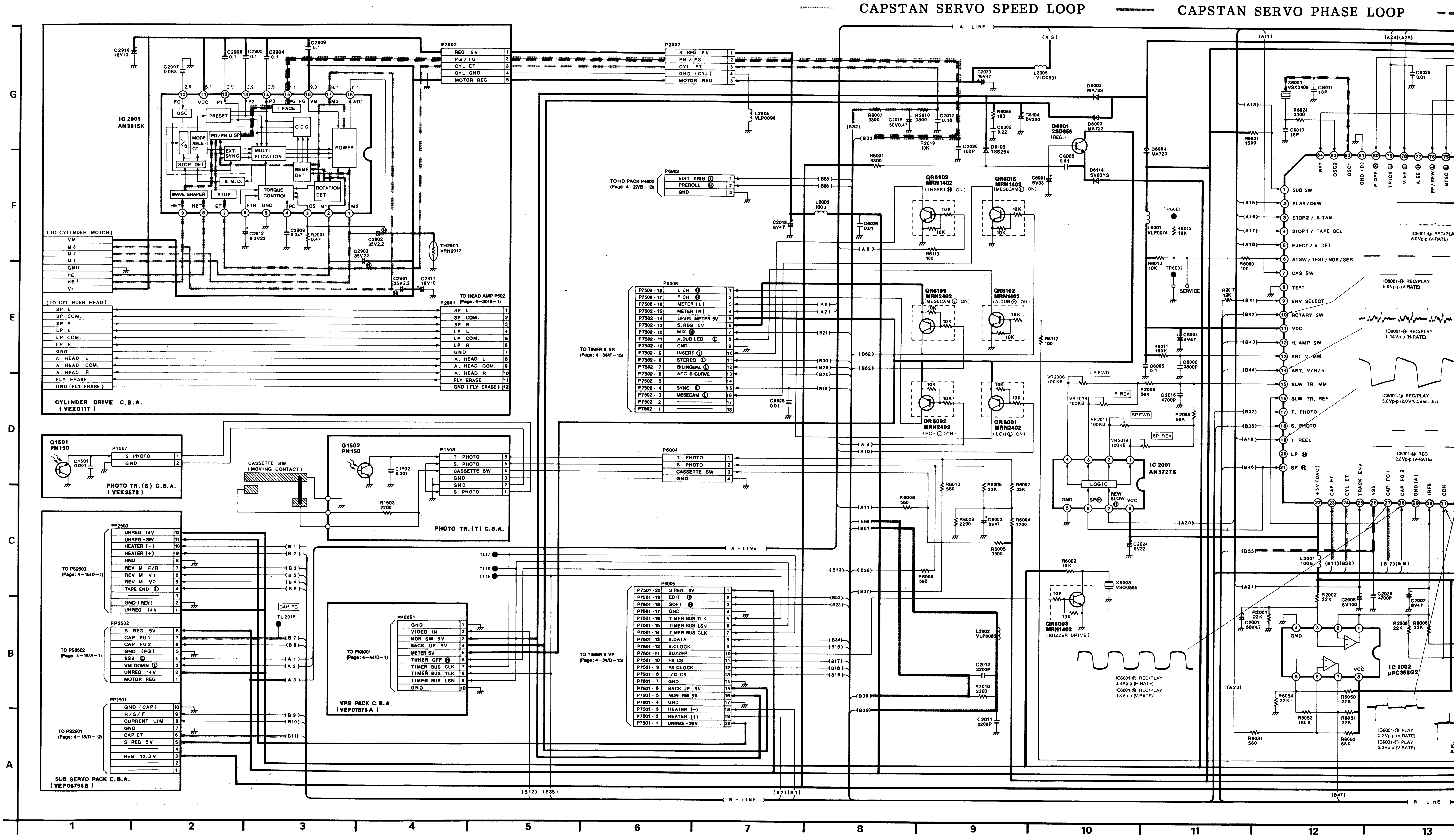

EED LOOP
CAPSTAN SERVO PHASE LOOP
CYLINDER SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP
IC6001
SERVICE MODE
CAP EC (ERROR VOLTAGE)
ENV SELECT
AUTO TRACKING ENV
CAP R/S/F (REV Ⓛ/ STOP Ⓜ/ FWD Ⓗ)
SLOW TRACKING V REF
VM DOWN Ⓛ
CTL ⊕
CTL ⊖
CAP FG2
CAP FG1
CYL PG M.M
NTSC Ⓛ
TAKE-UP PHOTO SENSOR
SUPPLY PHOTO SENSOR
CASSETTE SW (HALF Ⓗ DOWN Ⓜ EJECT Ⓛ)
SLOW STILL STOP Ⓛ
REV MOTOR CONTROL 2
REV MOTOR CONTROL 1
REV MOTOR FWD Ⓛ /RVS Ⓗ
TAPE END Ⓛ
SLOW TRACKING
FORWARD Ⓛ/REVERSE Ⓗ
SP Ⓗ
AUDIO DUB Ⓗ
CYL PG.FG
CYL EC (ERROR VOLTAGE)
CTL OUT
CTL (−)
CTL (+)
CTL AGC
CTL AGC
SOLENOID ON Ⓛ
F.F/REW Ⓛ
RESET Ⓛ
D.REC Ⓗ
SP Ⓗ
NTSC Ⓛ
AUDIO HEAD SW
AUDIO MODE SELECT Ⓗ
AUDIO MUTE Ⓗ
FM AUDIO MUTE Ⓗ
AFTER RECORDING Ⓗ
VSS
FROM VIDEO
ART. V SYNC
ROTARY SW
HAED AMP SW
HEAD SW
FULL ERASE Ⓗ
VIDEO EE Ⓛ
TO AUDIO
TO VIDEO
POWER OFF Ⓗ
INSERT Ⓗ
SERIAL DATA
SERIAL CLOCK
SUB SW (REV DET SW)
T-REEL PULSE
S-REEL PULSE
PLAY POSITION Ⓛ
EJECT POSITION Ⓛ
STOP 1 POSITION Ⓛ /PAL SECAM Ⓗ
STOP 2 POSITION Ⓛ /S · TAB Ⓗ
SENSOR LED Ⓛ
IC6001-㊱ PLAY 5.0Vp-p (V-RATE)
IC6001-⑫ REC/PLAY 5.0Vp-p (V-RATE)
IC6001-㉞ REC/PLAY 5.0Vp-p (V-RATE)
IC6001-㉗ REC/PLAY 0.8Vp-p (H-RATE)
IC6001-⑭ REC/PLAY 0.14Vp-p (H-RATE)
IC6001-㊹ REC/PLAY 0.8Vp-p (V-RATE)
IC6001-⑩ REC/PLAY 4.8Vp-p (V-RATE)
IC6001-㊸ REC/PLAY 5.0Vp-p (V-RATE)
IC6001-㊿ REC/PLAY 4.0Vp-p (1.0V/0.5sec. div)
IC6001-⑲ REC/PLAY 5.0Vp-p (2.0V/0.5sec. div)
IC6001-⑮ REC/PLAY 4.8Vp-p (V-RATE)
IC6001-㊶ PLAY 3.0Vp-p (V-RATE)
IC6001-㉛ PLAY 2.2Vp-p (V-RATE)
IC6001-㊳ PLAY 2.2Vp-p (V-RATE)
IC6001-㊻ REC/PLAY/FF/REW 5.0Vp-p (V-RATE)
IC6002-⑨ REC/PLAY 5.0Vp-p (V-RATE)
IC6003-⑰ REC/PLAY 7.0Vp-p (V-RATE)
IC6003-⑮ REC/PLAY 4.5Vp-p (V-RATE)
IC6003
REC START
SP Ⓗ
PAL Ⓗ
H.SW
INSERT Ⓗ
FLY ERASE Ⓗ
OSC 1
OSC 2
RST
X6002
OSC
P4003 P1502
FULL ERASE HEAD
P1003 P1101
TO POWER
QR1002
N.SW 5V
TPGND
TP6001 SERVICE
PS2501
PS2502
FROM HEAD AMP
P501 P3001
TP2026 CAP R/S/F
IC2002 (V REF)
CTL HAED
P1501 P4001
TL2015
PG SHIFTER
VR2001
(NTSC : ON) Q6102
SENSOR LED
TAKE UP PHOTO SENSOR
P1503 P6004
3.3K
IC2001
LOGIC
LP FWD VR2006
LP REV VR2018
SP FWD VR2011
SP REV VR2019
S DECELERTED
COME TO NEAR TAPE END
Q6105
QR6108
QR6104
TP2002 CTL
QR2002
QR2001
QR6005 (REW : ON)
QR6004 (RESET : ON)
IC6004 RESET
N.SW 5V
IC6002 INPUT SELECT
LOGIC
SENSOR LED Ⓛ:SELECT A Ⓗ:SELECT B
QR6010
QR6007
SENSOR LED DRIVE
Q6006
IC2002
VREF
+14V
+5VO
P6001
P1504
1 PLAY PO. Ⓛ
3 GND
4 SOLENOID (−)
5 EJECT PO. Ⓛ
6 SOLENOID (+)
7 STOP 1 PO. Ⓛ
8 STOP2 PO. Ⓛ
9 REEL PULSE (T)
10 SUB SW
11 S TAB Ⓛ
12 PHOTO SNS +B
13 REEL PULSE (S)
14 MOTOR GND
15 SENS LED
MODE SELECT SW
SOLENOID
REV DET SW
SAFETY TAB SW
SENSOR LED
IC1501 TAKE-UP REEL PULSE
IC1502 SUPPLY REEL PULSE
MECHANISM CONNECTION C.B.A
IC7503 RESET IC
NON SW 5V
IC7502 RESET IC
TO DEMODULATOR
CS
AFC (S)
DATA
TO DEMODULATOR VIDEO IC7401-③
CLOCK
TO FROM VPS
TIMER TLK
TIMER CLK
TIMER LSN
TO DEMODULATOR DECODER.
SYNC Ⓛ
TO VIDEO IC7401-④
IO · CS
IC7505
CLK
DATA IN
DATA OUT
CS
RST
QR7501
P6005 P7501

-- CYLINDER SERVO PHASE LOOP

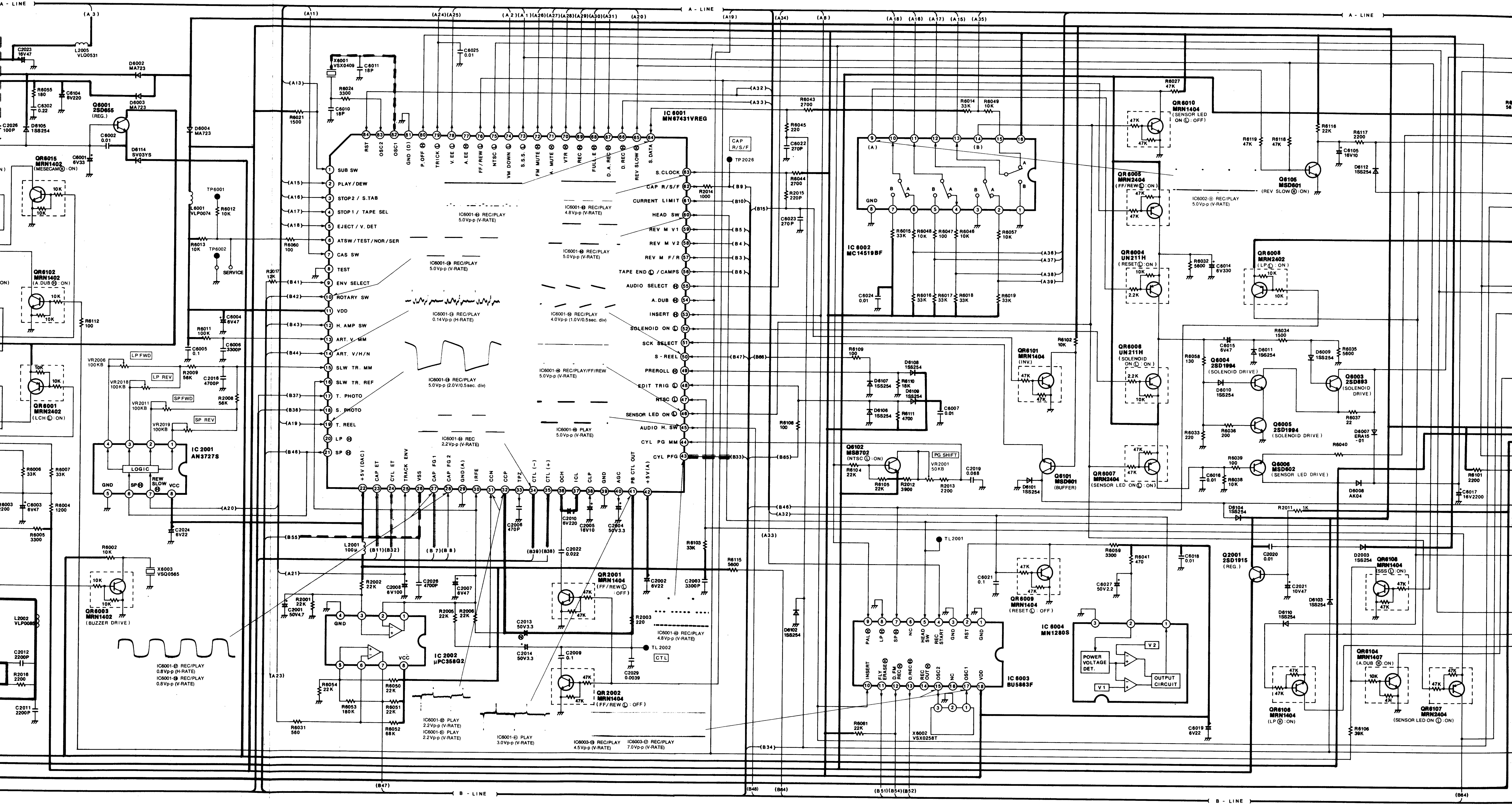

IC7503
RESET IC
NON SW 5V
IC7502
+5V
RESET IC
IC7501
RESET Ⓛ
DAC
POWER FAIL
S-CURVE
DATA OUT
CLK
TIMER CLK
DATA IN
CS
SYNC Ⓛ
IŌCS
SERIAL DATA OUT
SERIAL CLOCK
SERIAL DATA IN
TO DEMODULATOR
CS
AFC (S)
DATA
TO DEMODULATOR VIDEO IC7401-③
CLOCK
TO FROM VPS
TIMER TLK
TIMER CLK
TIMER LSN
TO DEMODULATOR DECODER.
SYNC Ⓛ
TO VIDEO IC7401-④
IO-CS
QR7501
IC7505
CLK
DATA IN
DATA OUT
CS
RST
P6005
P7501
MODE SELECT SW
IC2002
P6001
P1504
PLAY PO. Ⓛ
GND
SOLENOID (−)
EJECT PO. Ⓛ
SOLENOID (+)
STOP 1 PO.Ⓛ
STOP2 PO. Ⓛ
REEL PULSE (T)
SUB SW
S TAB Ⓛ
PHOTO SNS +B
REEL PULSE (S)
MOTOR GND
SENS LED
SOLENOID
REV DET SW
SAFETY TAB SW
SENSOR LED
IC1501
TAKE-UP REEL PULSE
IC1502
SUPPLY REEL PULSE
MECHANISM CONNECTION C.B.A
DP7501
VTR
AV
EW
12345678
SP LP ON OFF
SU MO TU WE TH FR SA
REMAIN WRITE ERASE
COUNT
HRS
VPS
OTR
REC
SEG.0
SEG.12
SEG.9
SEGMENT SIGNALS
GRID SIGNALS
QR7505
Ⓛ:ON
IC7506
QR7503
QR7504
GE1
GE2
FIX1
FIX2
METER R CH
METER L CH
P7502
FROM AUDIO
METER ADJ.
VR7501
P50
P51
P53
P55
P56
P57
P60
P61
P44
P43
P42
P41
P40
P7504
STILL
FF
REW
EJECT
STOP
POWER
VR C.B.A
PLAY
REC
TEPE SELECT
AUDIO SELECT
INSERT
A.DUB
RESET
SP/LP
TIMER REC
TV/VTR
CH.DN
CH.UP
SET (−)
SET (+)
EXT
PLOG
CLOCK
AFC/VPS
OTR OFF(−)
OTR OFF(+)
OTR ON(−)
OTR ON(+)
CANCEL
PAL/MESECAM
PRESET/FINE NORMAL
CLEAR
DOOR PANEL UNIT
3.9ms
34Vp-p
GRID 0 IC7501-
GRID 1 IC7501-
GRID 2 IC7501-
GRID 3 IC7501-
GRID 4 IC7501-
GRID 5 IC7501-
GRID 6 IC7501-
GRID 7 IC7501-
GRID 8 IC7501-
GRID 9 IC7501-
GRID 10 IC7501-
GRID 11 IC7501-
GRID 12 IC7501-
BUZZER
QR6003
OSC
X6003
IC7504-㉗ REC/PLAY 3.6Vp-p (V-RATE)
IC7504-㉘ REC/PLAY 2.8Vp-p (V-RATE)
IR
IR RECEIVER UNIT
+5V
32KHz
X0
X1
X7501 (BACK UP)
TIMER OSC
C7511
OSC 1
OSC 2
X7502
4.19MHz
X7503
IC7504
S IN
S OUT
CLK
IHT
X OUT
X IN
D2
RST
SHUTTLE 1
SHUTTLE 4
JOG 1
JOG 2
D0
S0
S1
S2
JOG SHUTTLE C.B.A
P7505
P6701
JOG SHUTTLE ENCODER UNIT
SW6701 JOG
METER 5V
D6705 FWD
D6702 STILL
D6704 REV

SECTION 4
SCHEMATIC DIAGRAM

4-1. SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM


CAPSTAN SERVO SPEED LOOP
CAPSTAN SERVO PHASE LOOP
A - LINE
B - LINE
IC 2901
AN3815K
OSC
PRESET
MODE SELECT
PG/FG DISP
EXT. SYNC
MULTI PLICATION
CDC
POWER
BEMF DET
STOP DET
S.M.D.
WAVE SHAPER
STOP
TORQUE CONTROL
ROTATION DET.
I. FACE
(TO CYLINDER MOTOR)
VM
M 3
M 2
M 1
GND
HE -
HE +
VH
(TO CYLINDER HEAD)
SP L
SP COM.
SP R
LP L
LP COM.
LP R
GND
A. HEAD L
A. HEAD COM.
A. HEAD R
FLY ERASE
GND (FLY ERASE)
CYLINDER DRIVE C.B.A.
(VEX0117)
P2902
REG 5V
PG / FG
CYL ET
CYL GND
MOTOR REG
P2901
TO HEAD AMP P502 (Page: 4-30/B-1)
TH2901
VRH0017
P2002
S. REG 5V
PG / FG
CYL ET
GND (CYL)
MOTOR REG
L2004
VLP0099
P6902
TO I/O PACK P4802 (Page: 4-27/B-13)
EDIT TRIG
PREROLL
GND
P6006
TO TIMER & VR (Page: 4-34/F-15)
L CH
R CH
METER (L)
METER (R)
LEVEL METER 5V
S. REG 5V
MIX
A.DUB LED
GND
INSERT
STEREO
BILINGUAL
AFC S-CURVE
SYNC
MESECAM
Q1501
PN150
P1507
S. PHOTO
GND
PHOTO TR. (S) C.B.A.
(VEK3578)
CASSETTE SW (MOVING CONTACT)
Q1502
PN150
P1508
T. PHOTO
S. PHOTO
CASSETTE SW
GND
PHOTO TR. (T) C.B.A.
P6004
PP2503
TO PS2503 (Page: 4-18/D-1)
UNREG 14V
UNREG -29V
HEATER (-)
HEATER (+)
GND
REV M F/R
REV M V1
REV M V2
TAPE END
GND (REV)
UNREG 14V
PP2502
TO PS2502 (Page: 4-18/A-1)
S. REG 5V
CAP FG1
CAP FG2
GND (FG)
SSS
VM DOWN
UNREG 14V
MOTOR REG
PP2501
TO PS2501 (Page: 4-18/D-12)
GND (CAP)
R/S/F
CURRENT LIM
GND
CAP ET
S. REG 5V
REG 12.3V
SUB SERVO PACK C.B.A.
(VEP06796B)
CAP FG
TL 2015
PP6001
TO PK6001 (Page: 4-44/D-1)
GND
VIDEO IN
NON SW 5V
BACK UP 5V
METER 5V
TUNER OFF
TIMER BUS CLK
TIMER BUS TLK
TIMER BUS LSN
VPS PACK C.B.A.
(VEP07575A)
TL17
TL19
TL18
P6005
TO TIMER & VR (Page: 4-34/D-15)
S.REG 5V
EDIT
SOFT
GND
TIMER BUS TLK
TIMER BUS LSN
TIMER BUS CLK
S.DATA
S.CLOCK
BUZZER
FS CS
FS CLOCK
I/O CS
GND
BACK UP 5V
NON SW 5V
GND
HEATER (-)
HEATER (+)
UNREG -29V
QR6103 MRN1402 (INSERT ON)
QR6015 MRN1402 (MESECAM ON)
QR6109 MRN2402 (MESECAM ON)
QR6102 MRN1402 (A DUB ON)
QR6002 MRN2402 (RCH ON)
QR6001 MRN2402 (LCH ON)
Q6001 2SD655 (REG.)
D6002 MA723
D6003 MA723
D6004 MA723
D6114 SV03YS
D6105 1SS254
L2005 VLQ0531
L2003 100µ
L6001 VLP0074
TP6001
TP6002
SERVICE
IC 2001
AN3727S
LOGIC
GND
SP
REW SLOW
VCC
LP FWD
LP REV
SP FWD
SP REV
VR2006 100KB
VR2018 100KB
VR2011 100KB
VR2019 100KB
QR6003 MRN1402 (BUZZER DRIVE)
X6003 VSQ0565
X6001 VSX0409
L2002 VLP0085
L2001 100µ
IC 2002
µPC358G2
IC6001 REC/PLAY 0.8Vp-p (H-RATE)
IC6001 REC/PLAY 0.8Vp-p (V-RATE)
IC6001 REC/PLAY 5.0Vp-p (V-RATE)
IC6001 REC/PLAY 0.14Vp-p (H-RATE)
IC6001 REC/PLAY 5.0Vp-p (2.0V/0.5sec. div)
IC6001 REC 2.2Vp-p (V-RATE)
IC6001 PLAY 2.2Vp-p (V-RATE)
SUB SW
PLAY / DEW
STOP 2 / S.TAB
STOP 1 / TAPE SEL
EJECT / V. DET
ATSW / TEST / NOR / SER
CAS SW
TEST
ENV SELECT
ROTARY SW
VDD
H. AMP SW
ART. V. MM
ART. V/H/N
SLW TR. MM
SLW TR. REF
T. PHOTO
S. PHOTO
T. REEL
LP
SP
RST
OSC2
OSC1
GND (D)
P. OFF
TRICK
V. EE
A. EE
FF/REW
NTSC
+5V (DAC)
CAP ET
CYL ET
TRACK ENV
VSS
CAP FG 1
CAP FG 2
GND (A)
IRFE
CCN
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13

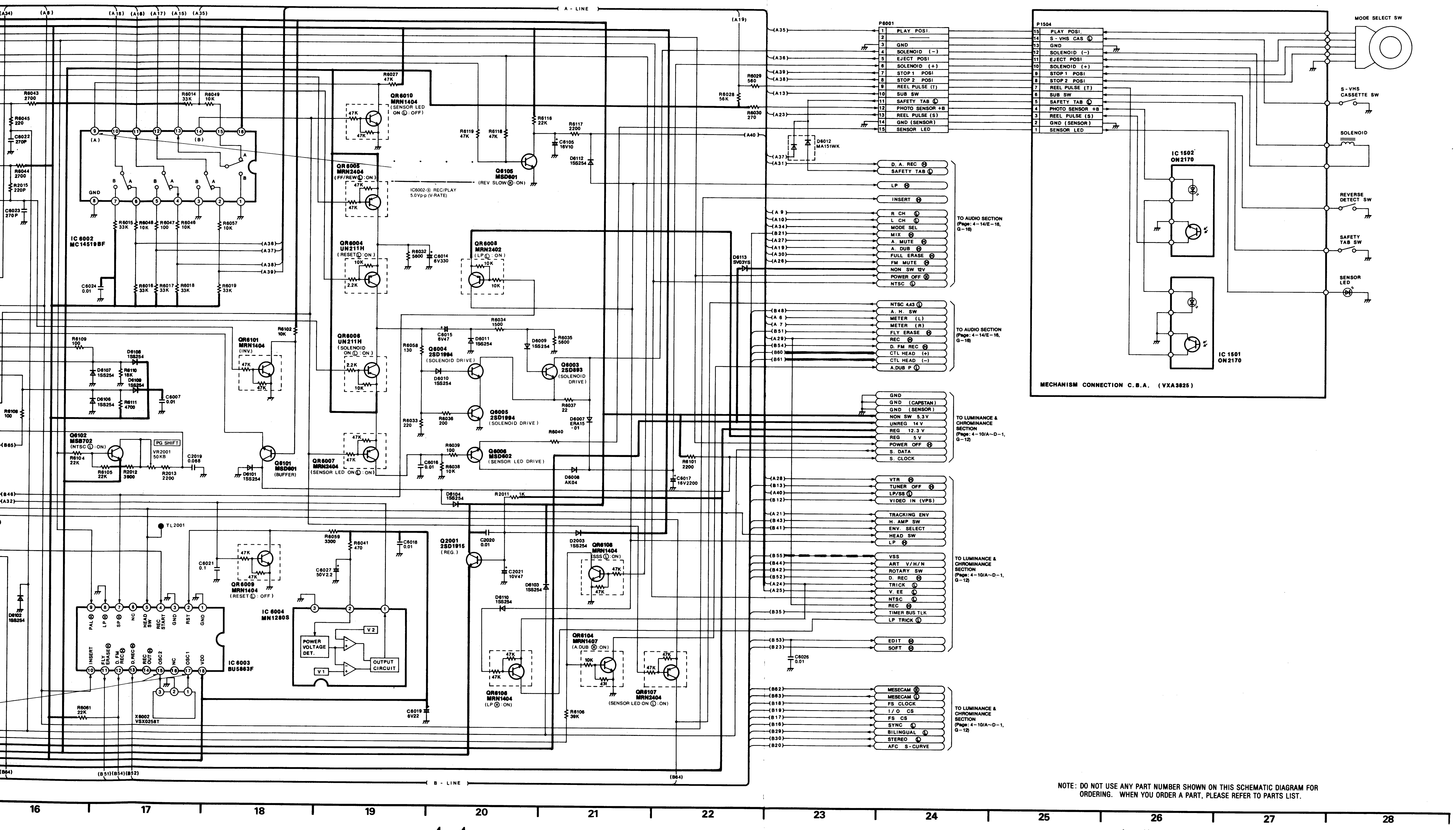
RVO SPEED LOOP — CAPSTAN SERVO PHASE LOOP - - - CYLINDER SERVO SPEED LOOP - — - CYLINDER SERVO PHASE LOOP


A - LINE
B - LINE
IC 6001 MN67431VREG
IC 6002 MC14519BF
IC 6003 BU5863F
IC 6004 MN1280S
IC 2001 AN3727S
IC 2002 μPC358G2
Q6001 2SD655 (REG.)
QR6015 MRN1402 (MESECAM(R):ON)
QR6102 MRN1402 (A.DUB (R):ON)
QR6001 MRN2402 (LCH(L):ON)
QR6003 MRN1402 (BUZZER DRIVE)
QR2001 MRN1404 (FF/REW(L):OFF)
QR2002 MRN1404 (FF/REW(L):OFF)
QR6010 MRN1404 (SENSOR LED ON (L):OFF)
QR6005 MRN2404 (FF/REW(L):ON)
QR6004 UN211H (RESET(L):ON)
QR6006 UN211H (SOLENOID ON (L):ON)
QR6007 MRN2404 (SENSOR LED ON(L):ON)
QR6008 MRN2402 (LP(L):ON)
QR6101 MRN1404 (INV.)
Q6101 MSD601 (BUFFER)
Q6102 MSB702 (NTSC(L):ON)
Q6105 MSD601 (REV SLOW(R):ON)
Q6004 2SD1994 (SOLENOID DRIVE)
Q6003 2SD893 (SOLENOID DRIVE)
Q6005 2SD1994 (SOLENOID DRIVE)
Q6006 MSD602 (SENSOR LED DRIVE)
QR6009 MRN1404 (RESET(L):OFF)
Q2001 2SD1915 (REG.)
QR6103 MRN1404 (SSS(L):ON)
QR6104 MRN1407 (A.DUB(R):ON)
QR6106 MRN1404 (LP(R):ON)
QR6107 MRN2404 (SENSOR LED ON (L):ON)
LP FWD
LP REV
SP FWD
SP REV
PG SHIFT
CAP R/S/F
TP2026
TP6001
TP6002
SERVICE
TL2001
TL2002
CTL
X6001 VSX0409
X6002 VSX0258T
X6003 VSQ0565
POWER VOLTAGE DET.
OUTPUT CIRCUIT
9
10
11
12
13
14
15
16
17
18
19
20
21
22

4—3

4—4

---- CYLINDER SERVO PHASE LOOP



A - LINE
B - LINE
IC 6002
MC14519BF
IC 6003
BU5863F
IC 6004
MN1280S
POWER VOLTAGE DET.
OUTPUT CIRCUIT
V1
V2
X6002
VSX0258T
QR6010
MRN1404
(SENSOR LED ON Ⓛ: OFF)
QR6005
MRN2404
(FF/REWⓁ: ON)
QR6004
UN211H
(RESETⓁ: ON)
QR6008
MRN2402
(LPⓁ: ON)
QR6006
UN211H
(SOLENOID ON Ⓛ: ON)
QR6007
MRN2404
(SENSOR LED ONⓁ: ON)
Q6105
MSD601
(REV SLOWⒽ: ON)
IC6002-⑧ REC/PLAY
5.0Vp-p (V-RATE)
Q6004
2SD1994
(SOLENOID DRIVE)
Q6003
2SB893
(SOLENOID DRIVE)
Q6005
2SD1994
(SOLENOID DRIVE)
Q6006
MSD602
(SENSOR LED DRIVE)
QR6101
MRN1404
(INV.)
Q6101
MSD601
(BUFFER)
Q6102
MSB702
(NTSC Ⓛ: ON)
PG SHIFT
VR2001
50KB
QR6009
MRN1404
(RESET Ⓛ: OFF)
Q2001
2SD1915
(REG.)
QR6103
MRN1404
(SSS Ⓛ: ON)
QR6104
MRN1407
(A.DUB Ⓗ: ON)
QR6106
MRN1404
(LP Ⓗ: ON)
QR6107
MRN2404
(SENSOR LED ON Ⓛ: ON)
TL2001
D6012
MA151WK
D6113
SV03YS
P6001
1 PLAY POSI.
2 ———
3 GND
4 SOLENOID (−)
5 EJECT POSI
6 SOLENOID (+)
7 STOP 1 POSI
8 STOP 2 POSI
9 REEL PULSE (T)
10 SUB SW
11 SAFETY TAB Ⓛ
12 PHOTO SENSOR +B
13 REEL PULSE (S)
14 GND (SENSOR)
15 SENSOR LED
P1504
15 PLAY POSI.
14 S-VHS CAS Ⓛ
13 GND
12 SOLENOID (−)
11 EJECT POSI
10 SOLENOID (+)
9 STOP 1 POSI
8 STOP 2 POSI
7 REEL PULSE (T)
6 SUB SW
5 SAFETY TAB Ⓛ
4 PHOTO SENSOR +B
3 REEL PULSE (S)
2 GND (SENSOR)
1 SENSOR LED
MODE SELECT SW
S-VHS CASSETTE SW
SOLENOID
REVERSE DETECT SW
SAFETY TAB SW
SENSOR LED
IC 1502
ON2170
IC 1501
ON2170
MECHANISM CONNECTION C.B.A. (VXA3825)
D. A. REC Ⓗ
SAFETY TAB Ⓛ
LP Ⓗ
INSERT Ⓗ
R CH Ⓛ
L CH Ⓛ
MODE SEL
MIX Ⓗ
A. MUTE Ⓗ
A. DUB Ⓗ
FULL ERASE Ⓗ
FM MUTE Ⓗ
NON SW 12V
POWER OFF Ⓗ
NTSC Ⓛ
TO AUDIO SECTION (Page: 4−14/E−16, G−16)
NTSC 4.43 Ⓛ
A. H. SW
METER (L)
METER (R)
FLY ERASE Ⓗ
REC Ⓗ
D. FM REC Ⓗ
CTL HEAD (+)
CTL HEAD (−)
A.DUB P Ⓛ
TO AUDIO SECTION (Page: 4−14/E−16, G−16)
GND
GND (CAPSTAN)
GND (SENSOR)
NON SW 5.3V
UNREG 14V
REG 12.3V
REG 5V
POWER OFF Ⓗ
S. DATA
S. CLOCK
TO LUMINANCE & CHROMINANCE SECTION (Page: 4−10/A−D−1, G−12)
VTR Ⓗ
TUNER OFF Ⓗ
LP/SS Ⓛ
VIDEO IN (VPS)
TRACKING ENV
H. AMP SW
ENV. SELECT
HEAD SW
LP Ⓗ
VSS
ART V/H/N
ROTARY SW
D. REC Ⓗ
TRICK Ⓛ
V. EE Ⓛ
NTSC Ⓛ
REC Ⓗ
TIMER BUS TLK
LP TRICK Ⓛ
EDIT Ⓗ
SOFT Ⓗ
TO LUMINANCE & CHROMINANCE SECTION (Page: 4−10/A−D−1, G−12)
MESECAM Ⓗ
MESECAM Ⓛ
FS CLOCK
I/O CS
FS CS
SYNC Ⓛ
BILINGUAL Ⓛ
STEREO Ⓛ
AFC S-CURVE
TO LUMINANCE & CHROMINANCE SECTION (Page: 4−10/A−D−1, G−12)
16
17
18
19
20
21
22
23
24
25
26
27
28

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

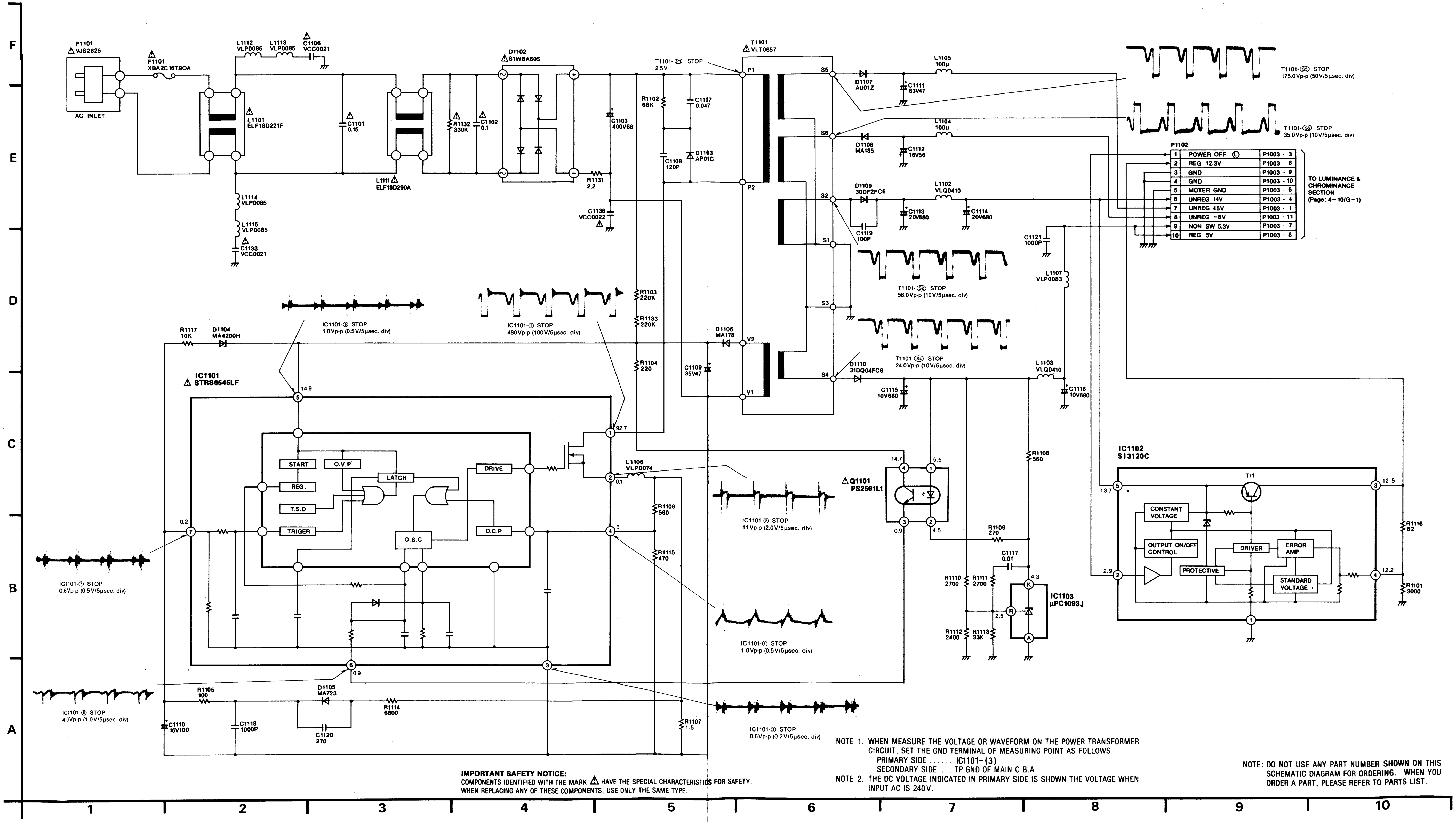
SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART (SP MODE)

REF. NO.	IC2001										IC2002									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8		
STOP 1	2.6	5.0	0	0	0	5.7	0	5.1			2.5	2.5	2.5	0	2.4	4.6	0.7	5.0		
PLAY	2.6	5.0	0	0	0	5.1	0	5.1			2.5	2.5	2.5	0	2.5	4.6	4.0	5.0		
REC	2.6	5.0	0	0	0	5.0	0	5.1			2.5	2.5	2.5	0	2.5	4.6	3.9	5.0		
F.F.	2.6	5.0	0	0	0	5.1	0	5.1			2.5	2.5	2.5	0	2.5	2.1	2.6	5.0		
REW	2.6	5.0	0	0	0	5.1	0	5.1			2.5	2.5	2.5	0	2.5	2.1	2.6	5.0		
REF. NO.	IC2901																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP 1	13.4	13.4	0.1	1.1	0	2.5	2.4	2.6	2.5	2.6	5.0	3.7	3.7	3.7	1.1	13.6	13.4	0.1		
PLAY	13.2	13.2	0.1	1.1	0	2.5	2.4	2.6	2.5	2.6	5.0	3.7	3.7	3.7	1.1	13.5	13.2	0.1		
REC	13.2	13.2	0.1	1.1	0	2.5	2.4	2.6	2.5	2.6	4.9	3.7	3.6	3.6	1.1	13.5	13.2	0.1		
F.F.	13.6	13.6	0	0.1	0	2.5	4.3	2.6	2.4	1.3	5.0	4.2	4.2	3.8	5.0	13.6	13.6	0		
REW	13.6	13.6	0	0.1	0	2.5	4.3	2.6	2.4	1.2	5.0	4.2	4.2	3.8	5.0	13.6	13.6	0		
REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP 1	0	0	0.3	0.3	5.1	0	2.0	0	0	3.1	5.1	0	0	0	0	2.5	3.3	3.3	0.3	0
PLAY	0	0	0.3	0.3	5.1	5.0	2.0	0	4.0	3.1	5.1	0	0	0	0	2.5	3.3	3.3	4.6	0
REC	0	0	0.3	0.3	5.1	5.0	2.0	0	4.6	3.1	5.1	0	0	0	0	2.5	3.3	3.3	4.6	0
F.F.	0	0.5	0.5	0	5.1	5.1	2.0	0	0	5.1	5.1	0	0	0	0	2.5	3.3	3.3	2.2	0
REW	0	0.5	0.5	0	5.1	5.1	2.0	0	0	5.1	5.1	0	0	0	0	2.5	3.3	3.3	2.2	0
REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP 1	5.1	5.1	0.2	2.5	2.5	2.5	2.5	2.5	0	2.5	2.4	2.6	5.0	0	0	0	2.5	0	0	2.5
PLAY	5.1	5.1	2.6	2.4	0	2.5	2.5	2.5	0	2.5	2.4	2.6	5.0	0	0	0	2.5	0	0	2.8
REC	0	5.1	0	2.4	0	2.5	2.5	2.5	0	2.5	2.4	2.6	0	2.4	2.8	0	2.5	0	0	2.5
F.F.	5.1	5.1	2.6	4.3	0	2.5	2.5	2.5	0	2.5	2.4	2.6	5.0	0	0	0	2.5	0	0	2.9
REW	5.1	5.1	2.6	4.3	0.7	2.5	2.5	2.5	0	2.5	2.4	2.6	5.0	0	0	0	2.5	2.5	0	2.9
REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP 1	2.6	5.0	1.1	3.0	0	4.8	5.0	5.1	0	0.7	4.0	5.1	0	0	5.1	5.1	0	0	0	3.1
PLAY	2.6	5.0	1.1	3.0	2.8	4.8	5.0	5.1	0	4.0	4.0	5.1	0	0	5.1	5.1	0	0	0	3.1
REC	2.5	5.0	1.1	2.9	0	4.7	5.0	5.0	0	3.9	4.0	5.1	0	0	5.0	5.0	0	0	0	0
F.F.	2.5	5.0	5.0	0.1	0	4.7	5.0	5.1	0	2.5	4.0	5.1	0	0	5.1	5.1	0	0	0	0
REW	2.5	5.0	5.0	0.1	0	4.7	5.0	5.1	0	2.5	0	5.1	0	0	5.1	5.1	0	0	0	0
REF. NO.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP 1	5.0	2.1	4.2	4.2	0	0	0	0	0	5.0	0	0	0	5.0	5.0	5.0	5.1	0.1	5.1	0
PLAY	5.0	0	4.3	4.2	0	0	0	0	0	5.0	0	0	5.0	0	5.0	5.0	0	5.1	5.1	0
REC	5.0	0	4.3	4.2	0	5.0	5.0	5.0	5.0	5.0	0	0	5.0	0	5.0	5.0	5.0	0.1	5.0	0
F.F.	5.0	0	4.2	4.2	0	0	0	0	0	5.0	0	0	5.0	5.0	5.0	0	0	0	5.1	0
REW	5.0	5.1	4.2	4.2	0	0	0	0	0	5.0	0	0	5.0	5.0	5.0	0	5.1	0.1	5.0	0
REF. NO.	IC6001																			
MODE	81	82	83	84																
STOP 1	0	–	–	4.3																
PLAY	0	–	–	4.3																
REC	0	–	–	4.3																
F.F.	0	–	–	4.9																
REW	0	–	–	4.9																
REF. NO.	IC6002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP 1	0	5.0	0	5.0	0.5	5.0	5.1	0	0.3	5.1	0.3	0.3	0	4.8	0	5.1				
PLAY	0	5.0	0	5.0	0.5	5.0	5.1	0	0.3	5.1	0.3	0.3	0	5.0	0	5.1				
REC	0	5.0	0	5.0	0.5	5.0	5.0	0	0.3	5.1	0.3	0.3	0	5.0	0	5.1				
F.F.	0	0	0	5.0	0.5	5.0	5.1	0	0.5	5.1	0.5	0	0.5	4.5	5.0	5.1				
REW	0	0	0	5.0	0.5	5.0	5.1	0	0	5.1	0.5	0	0.5	4.5	5.0	5.1				
REF. NO.	IC6003																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP 1	0	0	0	0	3.1	0	5.1	0	5.0	0	0	0.1	0.1	5.0	0	0	0.7	5.1		
PLAY	0	0.1	0	0	3.1	0	5.1	0	5.0	0	0	0.1	0.1	5.0	2.1	0	0.8	5.1		
REC	0	0	0	5.0	3.1	0	5.1	0	5.0	0	0	3.8	5.0	0	0	0	1.0	5.1		
F.F.	0	0	0	0	0	0	5.1	0	5.0	0	0	0.1	0.1	5.0	2.1	0	0.8	5.1		
REW	0	0	0	0	0	0	5.1	0	5.0	0	0	0.1	0.1	5.0	2.1	0	0.8	5.1		
REF. NO.	IC6004																			
MODE	1	2	3																	
STOP 1	4.3	4.9	0																	
PLAY	4.3	4.9	0																	
REC	4.3	4.9	0																	
F.F.	4.9	5.0	0																	
REW	4.9	5.0	0																	

SYSTEM CONTROL & SERVO TRANSISTORs DC VOLTAGE CHART (SP MODE)

REF. NO.	Q2001			Q6001			Q6003			Q6004			Q6005			Q6006		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP 1	5.1	5.4	5.8	5.1	11.4	5.7	13.7	13.7	5.0	0.8	13.7	0.9	0	0.8	0	0.4	13.7	0.3
PLAY	5.1	5.4	5.8	5.1	11.3	5.7	13.6	13.6	4.9	1.4	13.6	1.4	0	1.1	0	0.4	13.6	0.3
REC	5.1	5.4	5.8	5.1	11.3	5.7	13.5	13.5	4.8	0.9	13.5	1.0	0	0.8	0	0.4	13.5	0.3
F.F.	5.1	5.4	5.8	5.1	11.3	5.7	13.6	13.6	5.0	1.4	13.6	1.5	0	1.4	0	0.6	13.6	0.5
REW	5.1	5.4	5.8	5.1	11.3	5.7	13.6	13.6	5.0	1.4	13.6	1.4	0	1.3	0	0.6	13.6	0.5
REF. NO.	Q6101			Q6102			Q6105											
MODE	E	C	B	E	C	B	E	C	B									
STOP 1	4.0	5.2	0.4	5.0	4.8	5.0	0	5.0	0									
PLAY	4.0	5.2	0.4	5.1	4.8	5.0	0	0	0.6									
REC	4.0	5.2	0.4	5.1	4.7	5.0	0	0	0.6									
F.F.	4.0	5.2	0.4	5.1	4.3	5.0	0	0	0.6									
REW	4.0	5.2	0.4	5.1	4.3	5.0	0	0	0.6									
REF. NO.	QR2001			QR2002			QR6001			QR6002			QR6003			QR6004		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP 1	0	0	5.0	0	0	5.0	5.1	5.1	0	5.1	5.1	0	0	0	4.9	1.4	0	4.3
PLAY	0	0	5.0	0	0	5.0	5.1	5.1	0	5.1	5.1	0	0	0	4.9	1.5	0	4.3
REC	0	0	5.0	0	0	5.0	5.1	5.1	0	5.1	5.1	0	0	0	4.9	1.5	0	4.3
F.F.	0	0	0	0	0.8	0	5.1	5.1	0	5.1	5.1	0	0	0	4.9	5.0	0	4.9
REW	0	0	0	0	0.8	0	5.1	5.1	0	5.1	5.1	0	0	0	4.9	5.0	0	4.9
REF. NO.	QR6005			QR6006			QR6007			QR6008			QR6009			QR6010		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP 1	5.1	1.4	5.0	5.1	0	5.1	5.1	0.3	4.8	5.0	0	5.1	0	0.1	4.3	0	0.3	4.7
PLAY	5.1	1.5	5.0	5.1	0	5.1	5.1	0.3	4.8	5.0	0	5.1	0	0.1	4.3	0	0.3	4.8
REC	5.1	1.5	5.0	5.1	0	5.0	5.1	0.3	4.8	5.0	0	5.1	0	0.1	4.3	0	0.3	4.7
F.F.	5.1	5.0	0	5.1	0	5.1	5.1	0.6	4.6	5.0	0	5.1	0	0.1	4.9	0	0.5	4.7
REW	5.1	5.0	0	5.1	0	5.1	5.1	0.5	4.6	5.0	0	5.1	0	0.1	4.9	0	0.5	4.7
REF. NO.	QR6101			QR6102			QR6103			QR6104			QR6105			QR6106		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP 1	0	0.4	4.3	0	3.7	0	0	3.6	0	0	4.5	0	0	3.7	0.2	5.0	4.7	5.0
PLAY	0	0.4	4.3	0	3.6	0	0	3.6	0	0	4.4	0	0	3.6	0.2	5.1	4.7	5.0
REC	0	0.4	4.3	0	3.7	0	0	3.8	0	0	4.5	0	0	3.8	0.2	5.1	4.7	5.0
F.F.	0	0.4	4.3	0	3.8	0	0	3.9	0	0	4.6	0	0	4.0	0.2	5.1	4.7	5.0
REW	0	0.4	4.3	0	3.9	0	0	3.9	0	0	4.6	0	0	3.9	0.2	5.1	4.7	5.0
REF. NO.	QR6107			QR6108			QR6109											
MODE	E	C	B	E	C	B	E	C	B									
STOP 1	5.0	5.0	4.7	0	0	0	5.0	0.2	5.0									
PLAY	5.0	5.0	4.7	0	0	5.0	5.1	0.2	5.0									
REC	5.0	5.0	4.7	0	0	5.0	5.0	0.2	5.0									
F.F.	5.0	5.0	4.7	0	0	5.0	5.0	0.2	5.0									
REW	5.0	5.0	4.7	0	0	5.0	5.1	0.2	5.0									

4-2. POWER SCHEMATIC DIAGRAM


F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
P1101
⚠VJS2625
AC INLET
⚠ F1101 XBA2C16TBOA
L1101 ⚠ ELF18D221F
L1112 VLP0085
L1113 VLP0085
⚠ C1106 VCC0021
C1101 ⚠ 0.15
L1111 ⚠ ELF18D290A
R1132 330K
⚠ C1102 0.1
D1102 ⚠S1WBA60S
L1114 VLP0085
L1115 VLP0085
⚠ C1133 VCC0021
C1103 400V68
R1131 2.2
C1136 VCC0022 ⚠
R1102 68K
C1107 0.047
C1108 120P
D1103 AP01C
T1101-Ⓟ STOP 2.5V
T1101 ⚠VLT0657
P1
P2
S5
S6
S2
S1
S3
S4
V2
V1
D1107 AU01Z
C1111 63V47
L1105 100μ
D1108 MA185
C1112 16V56
L1104 100μ
D1109 30DF2FC6
C1119 100P
C1113 20V680
L1102 VLQ0410
C1114 20V680
C1121 1000P
L1107 VLP0083
T1101-Ⓢ5 STOP 175.0Vp-p (50V/5μsec. div)
T1101-Ⓢ6 STOP 35.0Vp-p (10V/5μsec. div)
T1101-Ⓢ2 STOP 58.0Vp-p (10V/5μsec. div)
T1101-Ⓢ4 STOP 24.0Vp-p (10V/5μsec. div)
D1110 31DQ04FC6
C1115 10V680
L1103 VLQ0410
C1116 10V680
R1103 220K
R1133 220K
R1104 220
D1106 MA178
C1109 35V47
R1117 10K
D1104 MA4200H
IC1101-⑤ STOP 1.0Vp-p (0.5V/5μsec. div)
IC1101-① STOP 480Vp-p (100V/5μsec. div)
IC1101 ⚠ STR S6545LF
14.9
92.7
0.1
0
0.2
0.9
START
O.V.P
REG.
LATCH
T.S.D
TRIGER
DRIVE
O.S.C
O.C.P
L1106 VLP0074
R1106 560
R1115 470
IC1101-② STOP 11Vp-p (2.0V/5μsec. div)
IC1101-④ STOP 1.0Vp-p (0.5V/5μsec. div)
IC1101-⑦ STOP 0.6Vp-p (0.5V/5μsec. div)
IC1101-⑥ STOP 4.0Vp-p (1.0V/5μsec. div)
R1105 100
D1105 MA723
R1114 6800
C1110 16V100
C1118 1000P
C1120 270
R1107 1.5
IC1101-③ STOP 0.6Vp-p (0.2V/5μsec. div)
⚠Q1101 PS2561L1
14.7
5.5
4.5
R1108 560
R1109 270
C1117 0.01
R1110 2700
R1111 2700
R1112 2400
R1113 33K
4.3
2.5
IC1103 μPC1093J
IC1102 SI3120C
Tr1
13.7
12.5
2.9
12.2
CONSTANT VOLTAGE
OUTPUT ON/OFF CONTROL
DRIVER
ERROR AMP
PROTECTIVE
STANDARD VOLTAGE
R1116 62
R1101 3000
P1102
TO LUMINANCE & CHROMINANCE SECTION (Page: 4-10/G-1)

P1102

1	POWER OFF Ⓛ	P1003 - 3
2	REG 12.3V	P1003 - 6
3	GND	P1003 - 9
4	GND	P1003 - 10
5	MOTER GND	P1003 - 6
6	UNREG 14V	P1003 - 4
7	UNREG 45V	P1003 - 1
8	UNREG -8V	P1003 - 11
9	NON SW 5.3V	P1003 - 7
10	REG 5V	P1003 - 8

TO LUMINANCE & CHROMINANCE SECTION (Page: 4-10/G-1)

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

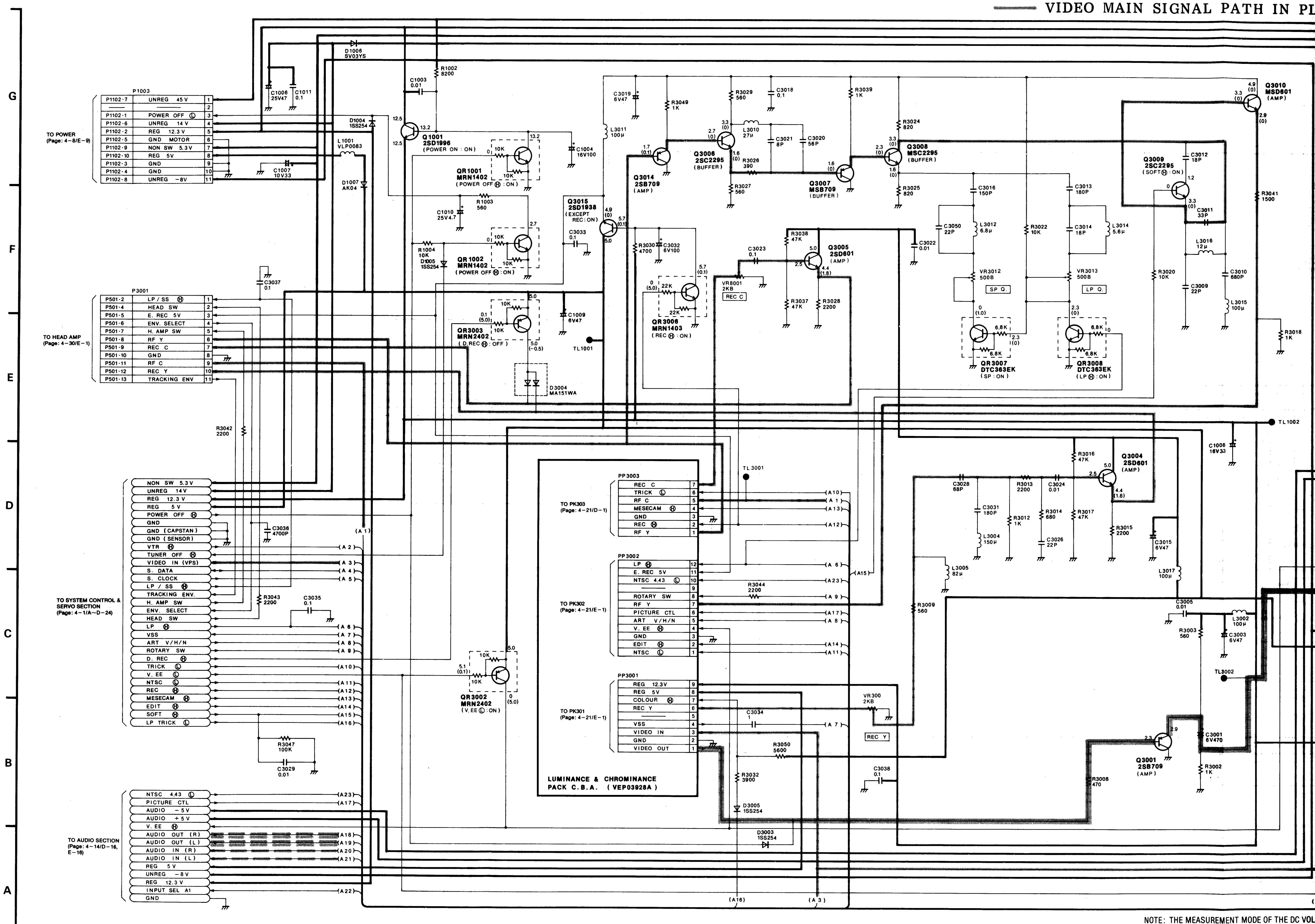
NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE ...... IC1101-(3)
SECONDARY SIDE ... TP GND OF MAIN C.B.A.

NOTE 2. THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 240V.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-3. LUMINANCE & CHROMINANCE SECTION IN MAIN SCHEMATIC DIAGRAM

VIDEO MAIN SIGNAL PATH IN RE
VIDEO MAIN SIGNAL PATH IN PL



G
F
E
D
C
B
A
P1003
TO POWER (Page: 4-8/E-9)
P1102-7 UNREG 45 V 1
2
P1102-1 POWER OFF Ⓛ 3
P1102-6 UNREG 14 V 4
P1102-2 REG 12.3 V 5
P1102-5 GND MOTOR 6
P1102-9 NON SW 5.3 V 7
P1102-10 REG 5V 8
P1102-3 GND 9
P1102-4 GND 10
P1102-8 UNREG -8V 11
P3001
TO HEAD AMP (Page: 4-30/E-1)
P501-2 LP / SS Ⓗ 1
P501-4 HEAD SW 2
P501-5 E. REC 5V 3
P501-6 ENV. SELECT 4
P501-7 H. AMP SW 5
P501-8 RF Y 6
P501-9 REC C 7
P501-10 GND 8
P501-11 RF C 9
P501-12 REC Y 10
P501-13 TRACKING ENV 11
TO SYSTEM CONTROL & SERVO SECTION (Page: 4-1/A-D-24)
NON SW 5.3 V
UNREG 14 V
REG 12.3 V
REG 5 V
POWER OFF Ⓗ
GND
GND (CAPSTAN)
GND (SENSOR)
VTR Ⓗ
TUNER OFF Ⓗ
VIDEO IN (VPS)
S. DATA
S. CLOCK
LP / SS Ⓗ
TRACKING ENV.
H. AMP SW
ENV. SELECT
HEAD SW
LP Ⓗ
VSS
ART V/H/N
ROTARY SW
D. REC Ⓗ
TRICK Ⓛ
V. EE Ⓛ
NTSC Ⓛ
REC Ⓗ
MESECAM Ⓗ
EDIT Ⓗ
SOFT Ⓗ
LP TRICK Ⓛ
TO AUDIO SECTION (Page: 4-14/D-16, E-16)
NTSC 4.43 Ⓛ
PICTURE CTL
AUDIO -5V
AUDIO +5V
V. EE Ⓗ
AUDIO OUT (R)
AUDIO OUT (L)
AUDIO IN (R)
AUDIO IN (L)
REG 5V
UNREG -8V
REG 12.3 V
INPUT SEL A1
GND
D1006 SV03YS
C1006 25V47
C1011 0.1
C1003 0.01
R1002 8200
D1004 1SS254
L1001 VLP0083
C1007 10V33
D1007 AK04
Q1001 2SD1996 (POWER ON : ON)
QR1001 MRN1402 (POWER OFF Ⓗ : ON)
R1003 560
C1010 25V4.7
R1004 10K
D1005 1SS254
QR1002 MRN1402 (POWER OFF Ⓗ : ON)
C1004 16V100
QR3003 MRN2402 (D.REC Ⓗ : OFF)
C1009 6V47
TL1001
D3004 MA151WA
C3037 0.1
R3042 2200
C3036 4700P
R3043 2200
C3035 0.1
QR3002 MRN2402 (V.EE Ⓛ : ON)
R3047 100K
C3029 0.01
Q3015 2SD1938 (EXCEPT REC : ON)
C3033 0.1
C3019 6V47
L3011 100μ
R3049 1K
Q3014 2SB709 (AMP)
R3029 560
C3018 0.1
L3010 27μ
C3021 8P
C3020 56P
Q3006 2SC2295 (BUFFER)
R3026 390
R3027 560
Q3007 MSB709 (BUFFER)
R3039 1K
R3024 820
Q3008 MSC2295 (BUFFER)
R3025 820
R3030 4700
C3032 6V100
QR3006 MRN1403 (REC Ⓗ : ON)
VR8001 2KB
REC C
C3023 0.1
R3038 47K
Q3005 2SD601 (AMP)
R3037 47K
R3028 2200
C3022 0.01
C3050 22P
L3012 6.8μ
C3016 150P
VR3012 500B
SP Q.
QR3007 DTC363EK (SP : ON)
R3022 10K
C3014 18P
L3014 5.6μ
C3013 180P
VR3013 500B
LP Q.
QR3008 DTC363EK (LP Ⓗ : ON)
Q3009 2SC2295 (SOFT Ⓗ : ON)
C3012 18P
C3011 33P
L3016 12μ
C3010 680P
R3020 10K
C3009 22P
L3015 100μ
Q3010 MSD601 (AMP)
R3041 1500
R3018 1K
TL1002
C1008 16V33
R3016 47K
Q3004 2SD601 (AMP)
C3028 68P
C3031 180P
L3004 150μ
R3012 1K
R3013 2200
R3014 680
C3024 0.01
C3026 22P
R3017 47K
R3015 2200
C3015 6V47
L3005 82μ
L3017 100μ
R3009 560
C3005 0.01
R3003 560
L3002 100μ
C3003 6V47
TL3002
C3001 6V470
Q3001 2SB709 (AMP)
R3002 1K
R3008 470
TL3001
PP3003
TO PK303 (Page: 4-21/D-1)
REC C 7
TRICK Ⓛ 6
RF C 5
MESECAM Ⓗ 4
GND 3
REC Ⓗ 2
RF Y 1
PP3002
TO PK302 (Page: 4-21/E-1)
LP Ⓗ 12
E. REC 5V 11
NTSC 4.43 Ⓛ 10
9
ROTARY SW 8
RF Y 7
PICTURE CTL 6
ART V/H/N 5
V. EE Ⓗ 4
GND 3
EDIT Ⓗ 2
NTSC Ⓛ 1
PP3001
TO PK301 (Page: 4-21/E-1)
REG 12.3V 9
REG 5V 8
COLOUR Ⓗ 7
REC Y 6
5
VSS 4
VIDEO IN 3
GND 2
VIDEO OUT 1
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03928A)
R3044 2200
C3034 1
R3050 5600
R3032 3900
D3005 1SS254
D3003 1SS254
VR300 2KB
REC Y
C3038 0.1
(A1)
(A2)
(A3)
(A4)
(A5)
(A6)
(A7)
(A8)
(A9)
(A10)
(A11)
(A12)
(A13)
(A14)
(A15)
(A16)
(A17)
(A18)
(A19)
(A20)
(A21)
(A22)
(A23)

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

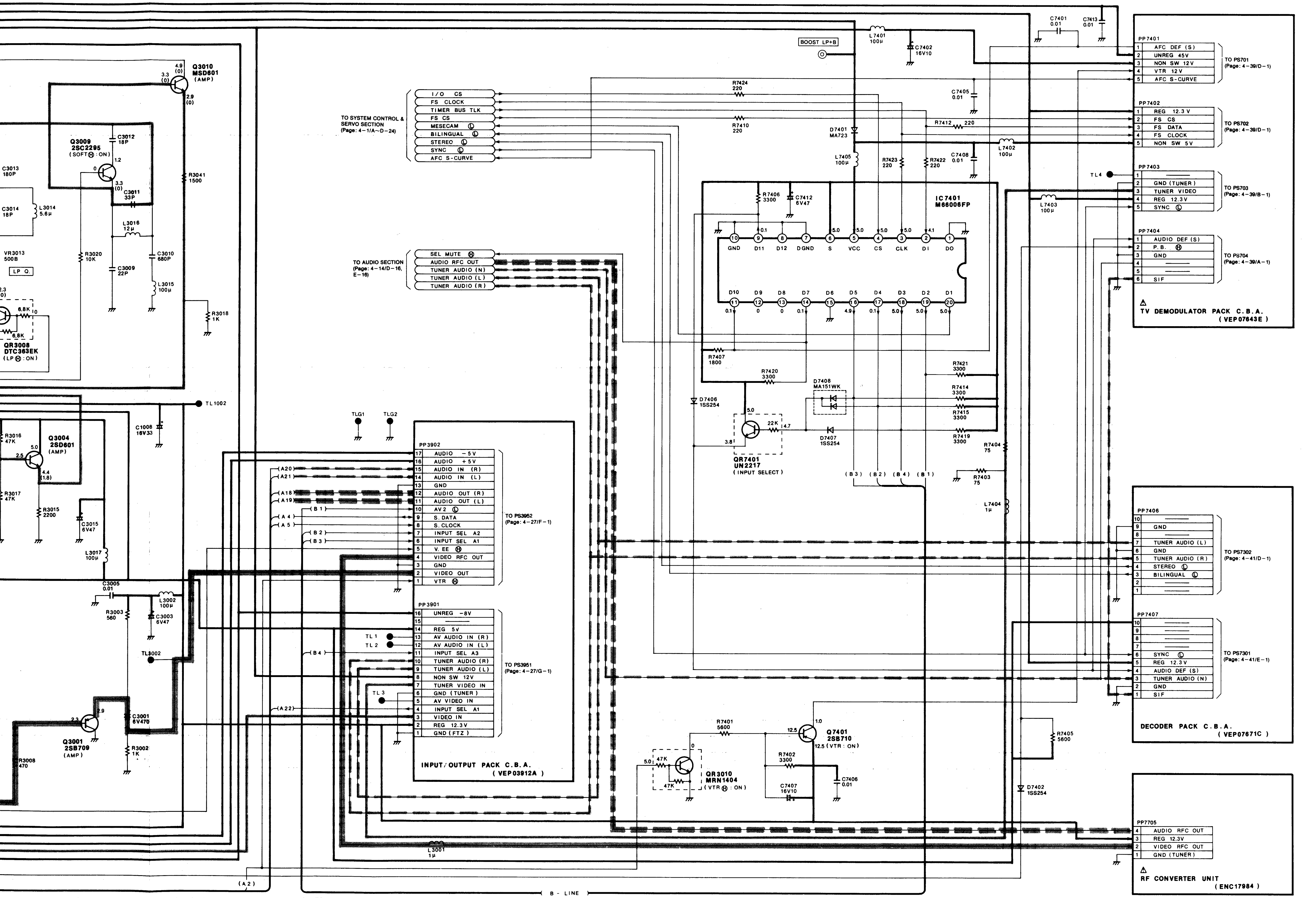
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOL
WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOL
WITH PAL COLOUR SIGNAL. (SP MODE)

1 2 3 4 5 6 7 8 9 10

EO MAIN SIGNAL PATH IN REC MODE
EO MAIN SIGNAL PATH IN PLAYBACK MODE

▬ ▬ ▬ AUDIO MAIN SIGNAL PATH IN REC MODE
▬ ▬ ▬ AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

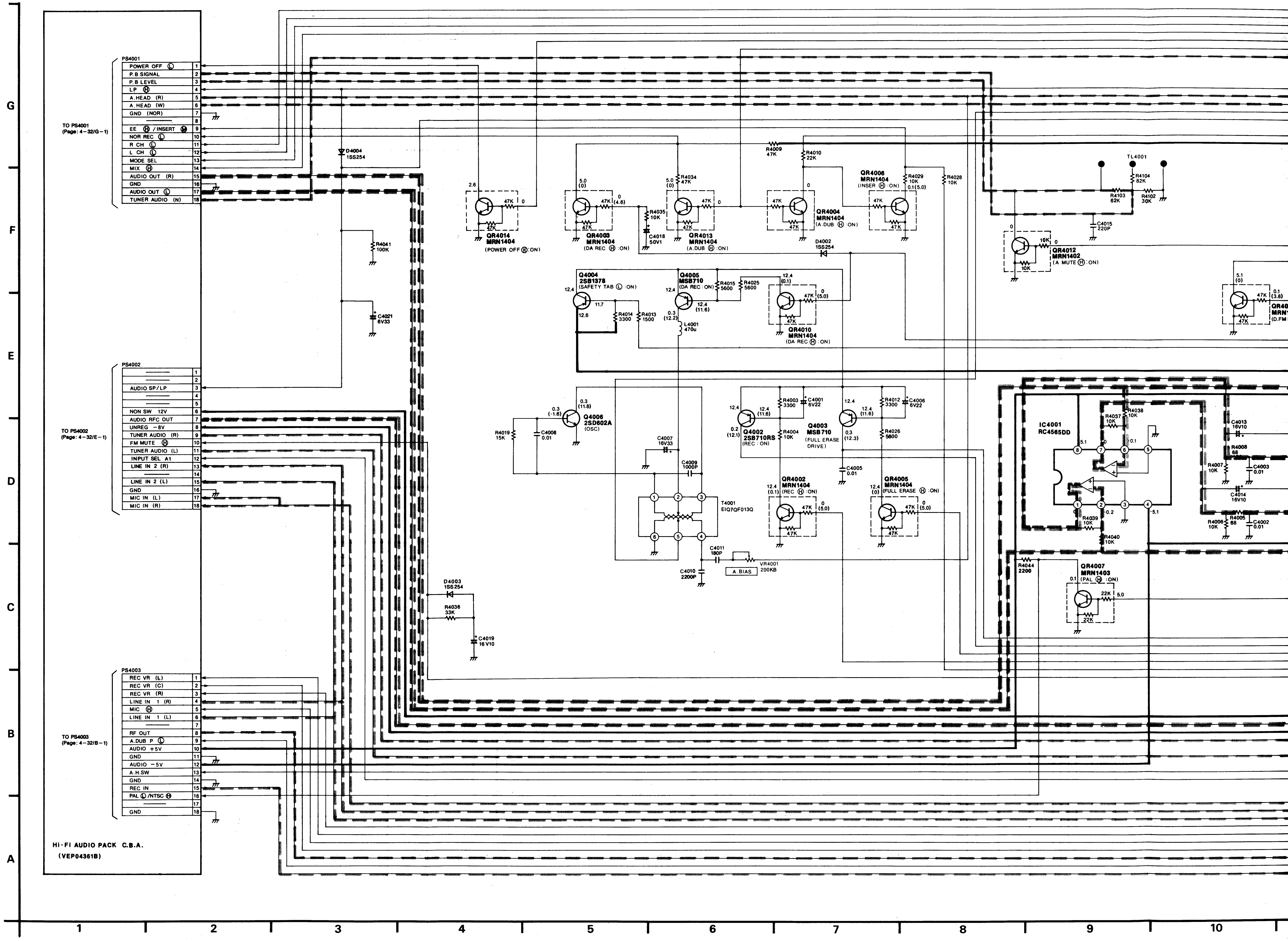

Q3010
MSD601
(AMP)
Q3009
2SC2295
(SOFT Ⓗ : ON)
R3041
1500
C3013
180P
C3014
18P
L3014
5.6μ
L3016
12μ
C3010
680P
C3009
22P
L3015
100μ
R3020
10K
VR3013
500B
LP Q
R3018
1K
QR3008
DTC363EK
(LP Ⓗ : ON)
TL1002
C1008
16V33
R3016
47K
Q3004
2SD601
(AMP)
R3017
47K
R3015
2200
C3015
6V47
L3017
100μ
C3005
0.01
L3002
100μ
R3003
560
C3003
6V47
TL3002
Q3001
2SB709
(AMP)
C3001
6V470
R3002
1K
R3008
470
TO SYSTEM CONTROL & SERVO SECTION (Page: 4-1/A~D-24)
I/O CS
FS CLOCK
TIMER BUS TLK
FS CS
MESECAM Ⓛ
BILINGUAL Ⓛ
STEREO Ⓛ
SYNC Ⓛ
AFC S-CURVE
TO AUDIO SECTION (Page: 4-14/D-16, E-16)
SEL MUTE Ⓗ
AUDIO RFC OUT
TUNER AUDIO (N)
TUNER AUDIO (L)
TUNER AUDIO (R)
TLG1
TLG2
PP3902
AUDIO -5V
AUDIO +5V
AUDIO IN (R)
AUDIO IN (L)
GND
AUDIO OUT (R)
AUDIO OUT (L)
AV2 Ⓛ
S. DATA
S. CLOCK
INPUT SEL A2
INPUT SEL A1
V. EE Ⓗ
VIDEO RFC OUT
GND
VIDEO OUT
VTR Ⓗ
TO PS3952 (Page: 4-27/F-1)
PP3901
UNREG -8V
REG 5V
AV AUDIO IN (R)
AV AUDIO IN (L)
INPUT SEL A3
TUNER AUDIO (R)
TUNER AUDIO (L)
NON SW 12V
TUNER VIDEO IN
GND (TUNER)
AV VIDEO IN
INPUT SEL A1
VIDEO IN
REG 12.3V
GND (FTZ)
TO PS3951 (Page: 4-27/G-1)
TL1
TL2
TL3
INPUT/OUTPUT PACK C.B.A. (VEP03912A)
L3001
1μ
B - LINE
BOOST LP+B
L7401
100μ
C7402
16V10
C7401
0.01
C7413
0.01
R7424
220
R7410
220
C7405
0.01
R7412
220
D7401
MA723
L7405
100μ
R7423
220
R7422
220
C7408
0.01
L7402
100μ
R7406
3300
C7412
6V47
IC7401
M66006FP
GND D11 D12 DGND S VCC CS CLK DI DO
D10 D9 D8 D7 D6 D5 D4 D3 D2 D1
R7407
1800
R7420
3300
D7408
MA151WK
D7406
1SS254
QR7401
UN2217
(INPUT SELECT)
22K
D7407
1SS254
R7421
3300
R7414
3300
R7415
3300
R7419
3300
R7404
75
R7403
75
L7404
1μ
L7403
100μ
TL4
R7401
5600
Q7401
2SB710
12.5 (VTR : ON)
R7402
3300
C7407
16V10
C7406
0.01
QR3010
MRN1404
(VTR Ⓗ : ON)
R7405
5600
D7402
1SS254
PP7401
AFC DEF (S)
UNREG 45V
NON SW 12V
VTR 12V
AFC S-CURVE
TO PS701 (Page: 4-39/D-1)
PP7402
REG 12.3V
FS CS
FS DATA
FS CLOCK
NON SW 5V
TO PS702 (Page: 4-39/D-1)
PP7403
GND (TUNER)
TUNER VIDEO
REG 12.3V
SYNC Ⓛ
TO PS703 (Page: 4-39/B-1)
PP7404
AUDIO DEF (S)
P.B. Ⓗ
GND
SIF
TO PS704 (Page: 4-39/A-1)
TV DEMODULATOR PACK C.B.A. (VEP07643E)
PP7406
GND
TUNER AUDIO (L)
GND
TUNER AUDIO (R)
STEREO Ⓛ
BILINGUAL Ⓛ
TO PS7302 (Page: 4-41/D-1)
PP7407
SYNC Ⓛ
REG 12.3V
AUDIO DEF (S)
TUNER AUDIO (N)
GND
SIF
TO PS7301 (Page: 4-41/E-1)
DECODER PACK C.B.A. (VEP07671C)
PP7705
AUDIO RFC OUT
REG 12.3V
VIDEO RFC OUT
GND (TUNER)
RF CONVERTER UNIT (ENC17984)

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE
WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE
WITH PAL COLOUR SIGNAL. (SP MODE)

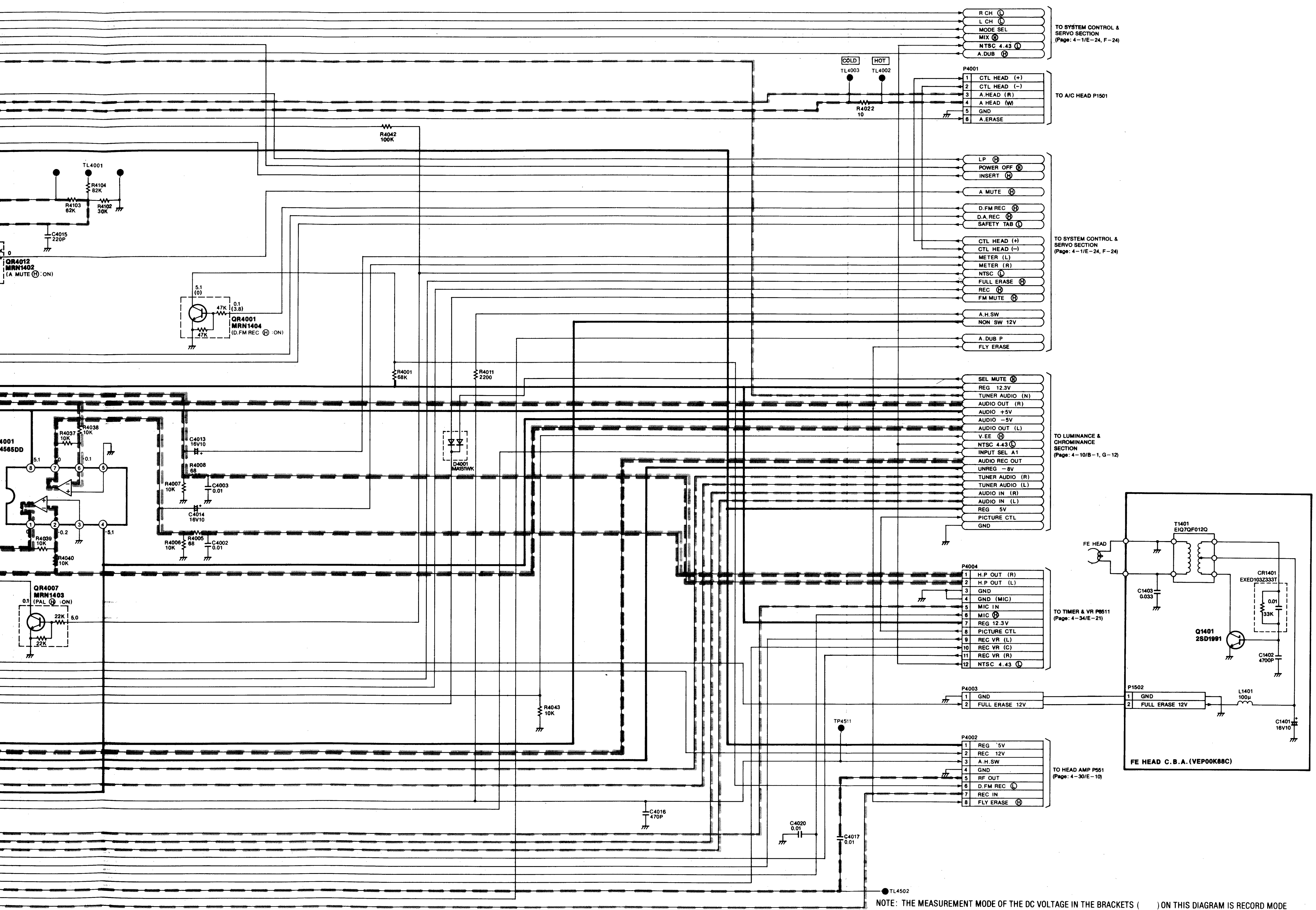
9 10 11 12 13 14 15 16 17 18

4-4. AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

MAIN SIGNA


HI·FI AUDIO PACK C.B.A.
(VEP04361B)
TO PS4001
(Page: 4−32/G−1)
PS4001
1 POWER OFF Ⓛ
2 P.B SIGNAL
3 P.B LEVEL
4 LP Ⓗ
5 A.HEAD (R)
6 A.HEAD (W)
7 GND (NOR)
8 ——
9 EE Ⓗ / INSERT Ⓜ
10 NOR REC Ⓛ
11 R CH Ⓛ
12 L CH Ⓛ
13 MODE SEL
14 MIX Ⓗ
15 AUDIO OUT (R)
16 GND
17 AUDIO OUT Ⓛ
18 TUNER AUDIO (N)
TO PS4002
(Page: 4−32/E−1)
PS4002
1 ——
2 ——
3 AUDIO SP/LP
4 ——
5 ——
6 NON SW 12V
7 AUDIO RFC OUT
8 UNREG −8V
9 TUNER AUDIO (R)
10 FM MUTE Ⓗ
11 TUNER AUDIO (L)
12 INPUT SEL A1
13 LINE IN 2 (R)
14 ——
15 LINE IN 2 (L)
16 GND
17 MIC IN (L)
18 MIC IN (R)
TO PS4003
(Page: 4−32/B−1)
PS4003
1 REC VR (L)
2 REC VR (C)
3 REC VR (R)
4 LINE IN 1 (R)
5 MIC Ⓗ
6 LINE IN 1 (L)
7 ——
8 RF OUT
9 A.DUB P Ⓛ
10 AUDIO +5V
11 GND
12 AUDIO −5V
13 A.H.SW
14 GND
15 REC IN
16 PAL Ⓛ/NTSC Ⓗ
17 ——
18 GND
D4004 1SS254
R4041 100K
C4021 6V33
D4003 1SS254
R4036 33K
C4019 16V10
QR4014 MRN1404 (POWER OFF Ⓗ:ON)
QR4003 MRN1404 (DA REC Ⓗ :ON)
R4035 10K
C4018 50V1
R4034 47K
QR4013 MRN1404 (A.DUB Ⓗ :ON)
R4009 47K
R4010 22K
QR4004 MRN1404 (A.DUB Ⓗ :ON)
QR4006 MRN1404 (INSER Ⓗ :ON)
R4029 10K
R4028 10K
D4002 1SS254
Q4004 2SB1378 (SAFETY TAB Ⓛ :ON)
R4014 3300
R4013 1500
Q4005 MSB710 (DA REC : ON)
R4015 5600
R4025 5600
L4001 470u
QR4010 MRN1404 (DA REC Ⓗ :ON)
Q4006 2SD602A (OSC)
R4019 15K
C4008 0.01
C4007 16V33
C4009 1000P
T4001 EIQ7QF013Q
C4011 180P
C4010 2200P
VR4001 200KB
A.BIAS
Q4002 2SB710RS (REC : ON)
R4003 3300
C4001 6V22
R4004 10K
Q4003 MSB710 (FULL ERASE DRIVE)
R4012 3300
C4006 6V22
R4026 5600
C4005 0.01
QR4002 MRN1404 (REC Ⓗ :ON)
QR4005 MRN1404 (FULL ERASE Ⓗ :ON)
TL4001
R4104 82K
R4103 62K
R4102 30K
C4015 220P
QR4012 MRN1402 (A MUTE Ⓗ :ON)
QR40
MRN1
(D.FM
IC4001 RC4565DD
R4037 10K
R4038 10K
R4039 10K
R4040 10K
C4013 16V10
R4008 68
R4007 10K
C4003 0.01
C4014 16V10
R4006 10K
R4005 68
C4002 0.01
R4044 2200
QR4007 MRN1403 (PAL Ⓗ :ON)
47K
10K
22K
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10

- - - MAIN SIGNAL PATH IN REC MODE — — — MAIN SIGNAL PATH IN PLAYBACK MODE


R CH Ⓛ
L CH Ⓛ
MODE SEL
MIX Ⓗ
NTSC 4.43 Ⓛ
A.DUB Ⓗ
TO SYSTEM CONTROL & SERVO SECTION (Page: 4−1/E−24, F−24)
COLD
HOT
TL4003
TL4002
R4022 10
P4001
1 CTL HEAD (+)
2 CTL HEAD (−)
3 A.HEAD (R)
4 A HEAD (W)
5 GND
6 A.ERASE
TO A/C HEAD P1501
R4042 100K
TL4001
R4104 82K
R4103 62K
R4102 30K
C4015 220P
QR4012
MRN1402
(A MUTE Ⓗ :ON)
LP Ⓗ
POWER OFF Ⓗ
INSERT Ⓗ
A MUTE Ⓗ
D.FM REC Ⓗ
D.A.REC Ⓗ
SAFETY TAB Ⓛ
CTL HEAD (+)
CTL HEAD (−)
METER (L)
METER (R)
NTSC Ⓛ
FULL ERASE Ⓗ
REC Ⓗ
FM MUTE Ⓗ
A.H.SW
NON SW 12V
A.DUB P
FLY ERASE
TO SYSTEM CONTROL & SERVO SECTION (Page: 4−1/E−24, F−24)
5.1 (0)
0.1 (3.8)
47K
47K
QR4001
MRN1404
(D.FM REC Ⓗ :ON)
R4001 68K
R4011 2200
4001
4565DD
R4037 10K
R4038 10K
5.1
0
0.1
-0.2
-5.1
R4039 10K
R4040 10K
C4013 16V10
R4008 68
R4007 10K
C4003 0.01
C4014 16V10
R4006 10K
R4005 68
C4002 0.01
D4001 MA151WK
QR4007
MRN1403
(PAL Ⓗ :ON)
0.1
22K
5.0
22K
SEL MUTE Ⓗ
REG 12.3V
TUNER AUDIO (N)
AUDIO OUT (R)
AUDIO +5V
AUDIO −5V
AUDIO OUT (L)
V.EE Ⓗ
NTSC 4.43 Ⓛ
INPUT SEL A1
AUDIO REC OUT
UNREG −8V
TUNER AUDIO (R)
TUNER AUDIO (L)
AUDIO IN (R)
AUDIO IN (L)
REG 5V
PICTURE CTL
GND
TO LUMINANCE & CHROMINANCE SECTION (Page: 4−10/B−1, G−12)
P4004
1 H.P OUT (R)
2 H.P OUT (L)
3 GND
4 GND (MIC)
5 MIC IN
6 MIC Ⓗ
7 REG 12.3V
8 PICTURE CTL
9 REC VR (L)
10 REC VR (C)
11 REC VR (R)
12 NTSC 4.43 Ⓛ
TO TIMER & VR P6511 (Page: 4−34/E−21)
P4003
1 GND
2 FULL ERASE 12V
R4043 10K
TP4511
P4002
1 REG 5V
2 REC 12V
3 A.H.SW
4 GND
5 RF OUT
6 D.FM REC Ⓛ
7 REC IN
8 FLY ERASE Ⓗ
TO HEAD AMP P551 (Page: 4−30/E−10)
C4016 470P
C4020 0.01
C4017 0.01
TL4502
FE HEAD
T1401
EIQ7QF012Q
C1403 0.033
CR1401
EXED103Z333T
0.01
33K
Q1401
2SD1991
C1402 4700P
P1502
1 GND
2 FULL ERASE 12V
L1401 100μ
C1401 16V10
FE HEAD C.B.A. (VEP00K88C)

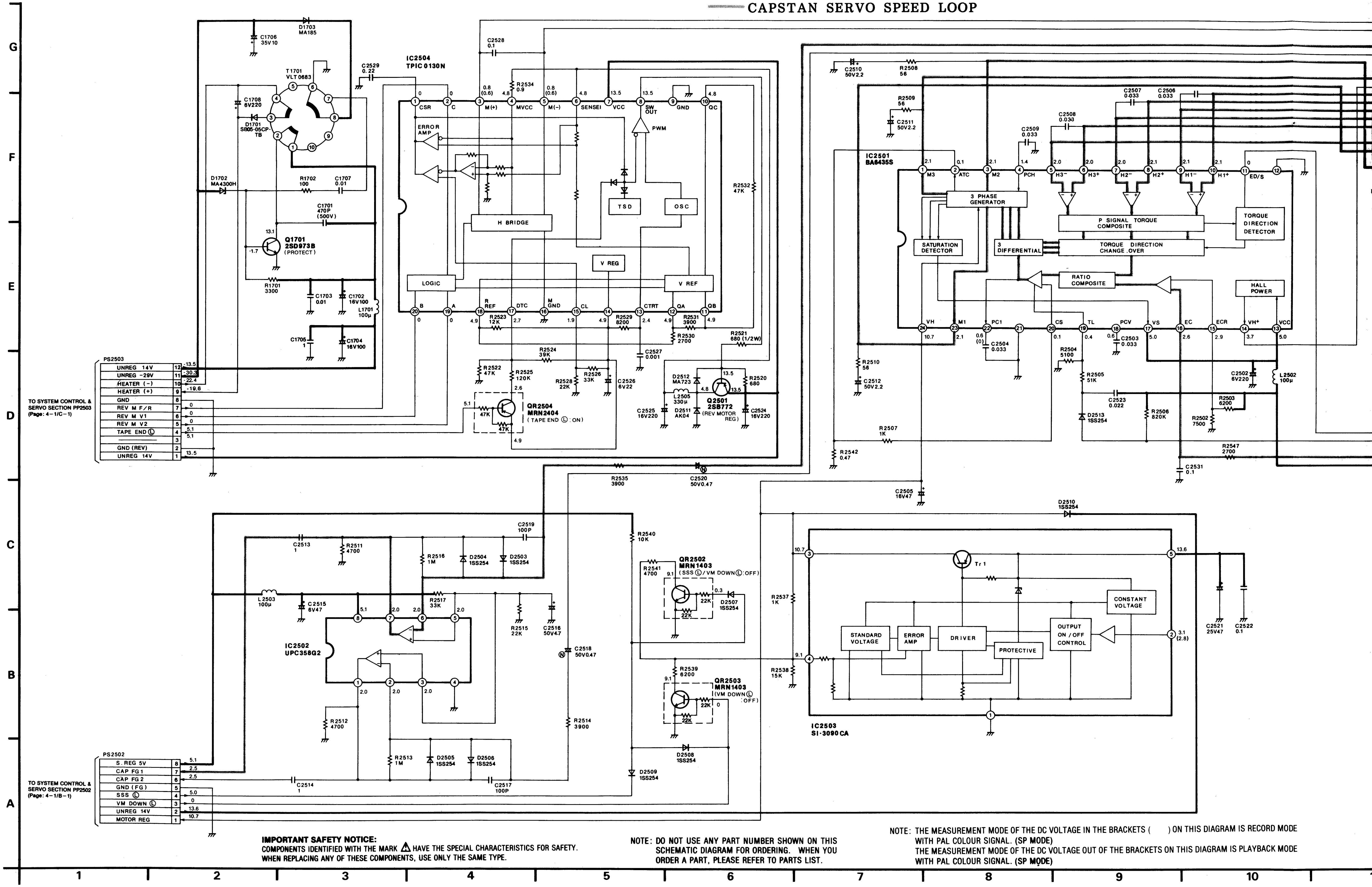
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

- LINE IN SIGNAL LEVEL... −10dB 1kHz

9 10 11 12 13 14 15 16 17 18

4-5. SUB SERVO PACK SCHEMATIC DIAGRAM

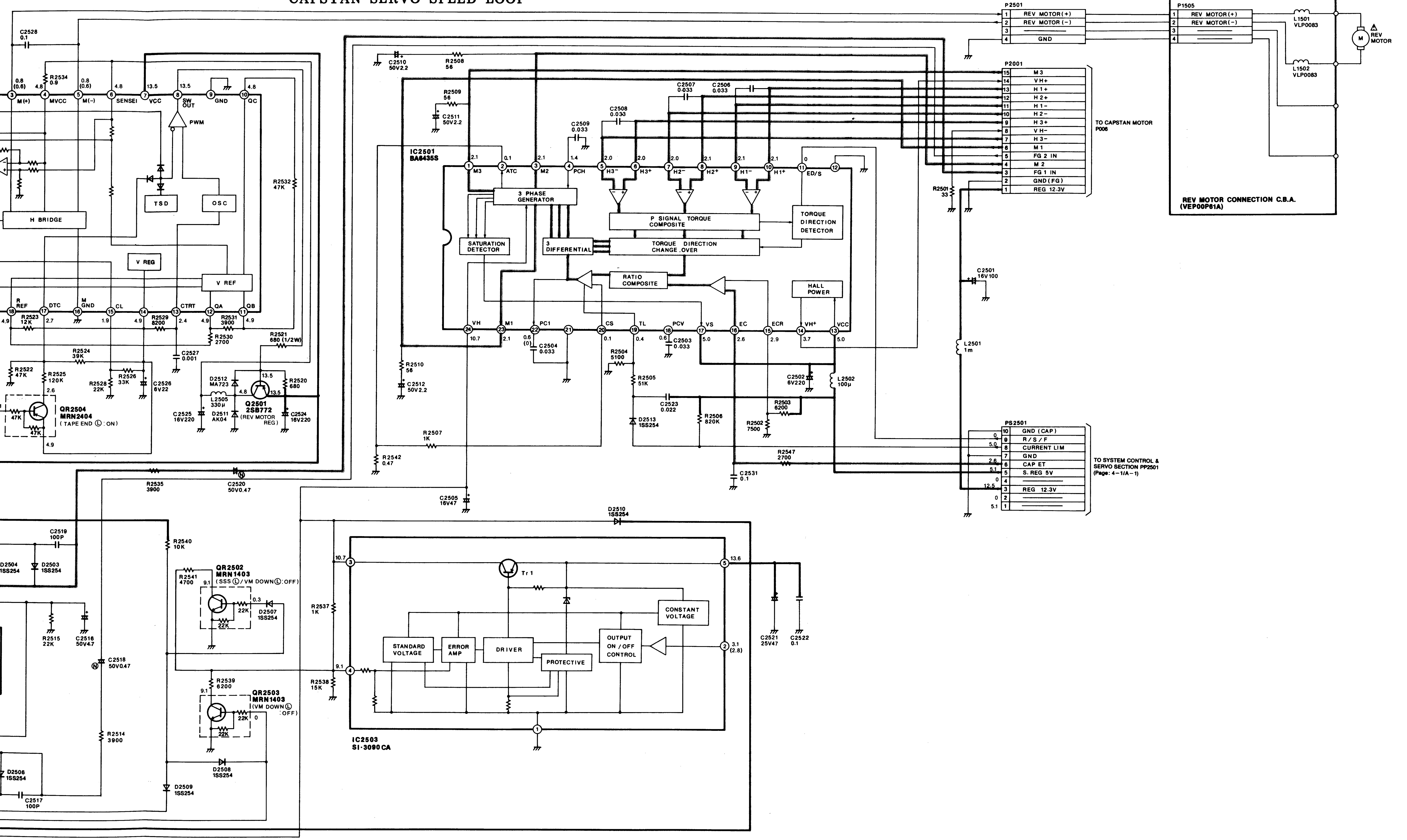

CAPSTAN SERVO SPEED LOOP
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
C1706 35V10
D1703 MA185
T1701 VLT 0683
C1708 6V220
D1701 SB05-05CP-TB
C2529 0.22
C2528 0.1
IC2504 TPIC 0130N
CSR
C
M(+)
MVCC
M(-)
SENSE I
VCC
SW OUT
GND
QC
R2534 0.9
ERROR AMP
PWM
TSD
OSC
H BRIDGE
V REG
LOGIC
V REF
B
A
REF
DTC
M GND
CL
CTRT
QA
QB
R2523 12K
R2529 8200
R2531 3900
R2530 2700
R2532 47K
R2521 680 (1/2W)
D1702 MA4300H
R1702 100
C1707 0.01
C1701 470P (500V)
Q1701 2SD973B (PROTECT)
R1701 3300
C1703 0.01
C1702 16V100
L1701 100μ
C1705 1
C1704 16V100
R2524 39K
C2527 0.001
R2522 47K
R2525 120K
R2528 22K
R2526 33K
C2526 6V22
D2512 MA723
R2520 680
QR2504 MRN2404 (TAPE END Ⓛ: ON)
L2505 330μ
Q2501 2SB772 (REV MOTOR REG)
C2525 16V220
D2511 AK04
C2524 16V220
PS2503
UNREG 14V
UNREG -29V
HEATER (-)
HEATER (+)
GND
REV M F/R
REV M V1
REV M V2
TAPE END Ⓛ
GND (REV)
UNREG 14V
TO SYSTEM CONTROL & SERVO SECTION PP2503 (Page: 4-1/C-1)
R2535 3900
C2520 50V0.47
C2510 50V2.2
R2508 56
R2509 56
C2511 50V2.2
C2507 0.033
C2506 0.033
C2508 0.033
C2509 0.033
IC2501 BA6435S
M3
ATC
M2
PCH
H3-
H3+
H2-
H2+
H1-
H1+
ED/S
3 PHASE GENERATOR
P SIGNAL TORQUE COMPOSITE
TORQUE DIRECTION DETECTOR
SATURATION DETECTOR
3 DIFFERENTIAL
TORQUE DIRECTION CHANGE OVER
RATIO COMPOSITE
HALL POWER
VH
M1
PC1
CS
TL
PCV
VS
EC
ECR
VH+
VCC
C2504 0.033
R2504 5100
C2503 0.033
R2510 56
C2512 50V2.2
R2505 51K
C2502 6V220
L2502 100μ
C2523 0.022
D2513 1SS254
R2506 820K
R2502 7500
R2503 6200
R2507 1K
R2542 0.47
R2547 2700
C2531 0.1
C2505 16V47
D2510 1SS254
C2519 100P
C2513 1
R2511 4700
R2516 1M
D2504 1SS254
D2503 1SS254
R2540 10K
QR2502 MRN1403 (SSS Ⓛ/VM DOWN Ⓛ: OFF)
R2541 4700
D2507 1SS254
L2503 100μ
C2515 6V47
R2517 33K
R2515 22K
C2516 50V4.7
IC2502 UPC358G2
C2518 50V0.47
R2537 1K
R2538 15K
R2539 6200
QR2503 MRN1403 (VM DOWN Ⓛ: OFF)
R2512 4700
R2514 3900
R2513 1M
D2505 1SS254
D2506 1SS254
D2508 1SS254
D2509 1SS254
C2514 1
C2517 100P
Tr1
CONSTANT VOLTAGE
STANDARD VOLTAGE
ERROR AMP
DRIVER
PROTECTIVE
OUTPUT ON/OFF CONTROL
IC2503 SI-3090CA
C2521 25V47
C2522 0.1
PS2502
S. REG 5V
CAP FG1
CAP FG2
GND (FG)
SSS Ⓛ
VM DOWN Ⓛ
UNREG 14V
MOTOR REG
TO SYSTEM CONTROL & SERVO SECTION PP2502 (Page: 4-1/B-1)

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

CAPSTAN SERVO SPEED LOOP


P2501
REV MOTOR(+)
REV MOTOR(−)
GND
P1505
L1501 VLP0083
L1502 VLP0083
REV MOTOR
REV MOTOR CONNECTION C.B.A. (VEP00P61A)
P2001
M 3
VH+
H 1+
H 2+
H 1−
H 2−
H 3+
VH−
H 3−
M 1
FG 2 IN
M 2
FG 1 IN
GND(FG)
REG 12.3V
TO CAPSTAN MOTOR P006
IC2501 BA6435S
3 PHASE GENERATOR
SATURATION DETECTOR
3 DIFFERENTIAL
P SIGNAL TORQUE COMPOSITE
TORQUE DIRECTION CHANGE OVER
TORQUE DIRECTION DETECTOR
RATIO COMPOSITE
HALL POWER
M3 ATC M2 PCH H3− H3+ H2− H2+ H1− H1+ ED/S
VH M1 PC1 CS TL PCV VS EC ECR VH+ VCC
M(+) MVCC M(−) SENSEI VCC SW OUT GND QC
PWM
TSD
OSC
H BRIDGE
V REG
V REF
R REF DTC M GND CL CTRT QA QB
Q2501 2SB772 (REV MOTOR REG)
QR2504 MRN2404 (TAPE END Ⓛ:ON)
QR2502 MRN1403 (SSS Ⓛ/VM DOWN Ⓛ:OFF)
QR2503 MRN1403 (VM DOWN Ⓛ:OFF)
PS2501
GND (CAP)
R/S/F
CURRENT LIM
GND
CAP ET
S. REG 5V
REG 12.3V
TO SYSTEM CONTROL & SERVO SECTION PP2501 (Page: 4−1/A−1)
IC2503 SI-3090CA
Tr 1
CONSTANT VOLTAGE
STANDARD VOLTAGE
ERROR AMP
DRIVER
PROTECTIVE
OUTPUT ON / OFF CONTROL
4 5 6 7 8 9 10 11 12 13 14

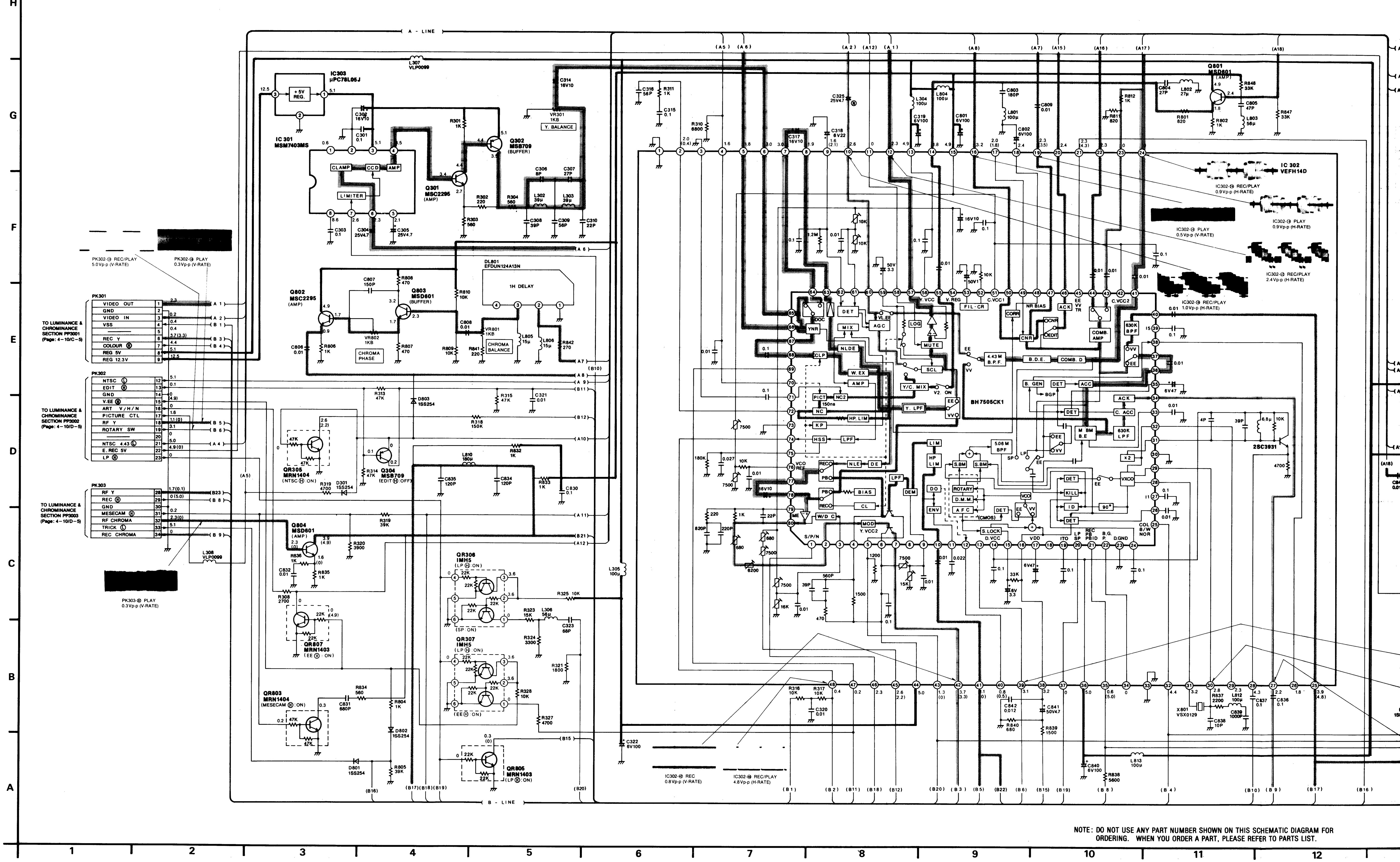
L CHARACTERISTICS FOR SAFETY.
SAME TYPE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

4-6. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM

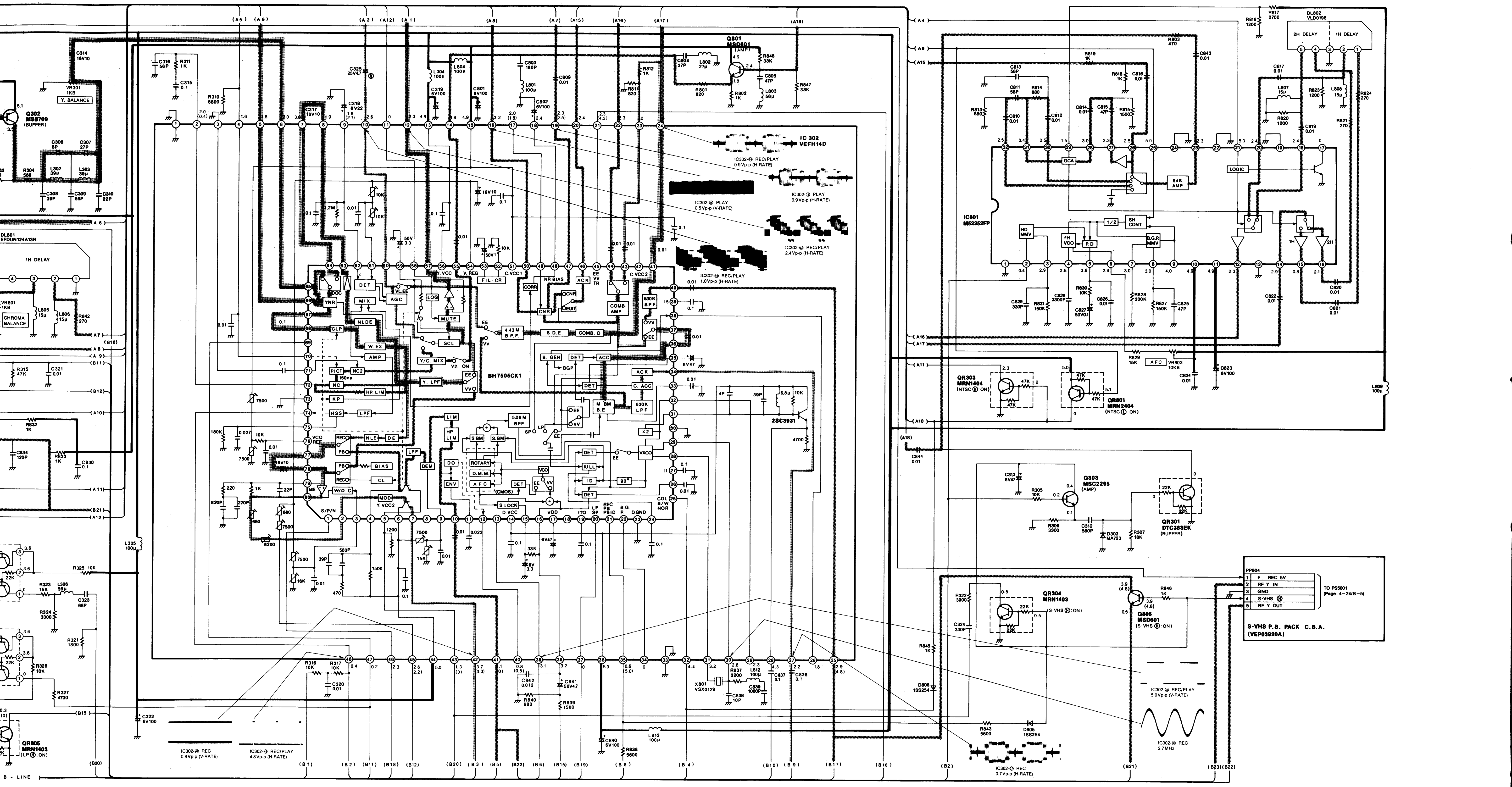
MAIN SIGNAL PATH IN REC MODE — MAIN SIGNAL PATH IN PLAYBACK MODE


A - LINE
B - LINE
IC303 μPC78L05J
+5V REG.
IC 301 MSM7403MS
CLAMP
CCD
AMP
LIMITER
Q301 MSC2295 (AMP)
Q302 MSB709 (BUFFER)
VR301 1KB Y. BALANCE
L307 VLP0099
Q802 MSC2295 (AMP)
Q803 MSD601 (BUFFER)
DL801 EFDUN124A13N
1H DELAY
VR802 1KB CHROMA PHASE
VR801 1KB CHROMA BALANCE
PK301
VIDEO OUT
GND
VIDEO IN
VSS
REC Y
COLOUR
REG 5V
REG 12.3V
TO LUMINANCE & CHROMINANCE SECTION PP3001 (Page: 4-10/C-5)
PK302
NTSC
EDIT
GND
V.EE
ART V/H/N
PICTURE CTL
RF Y
ROTARY SW
NTSC 4.43
E. REC 5V
LP
TO LUMINANCE & CHROMINANCE SECTION PP3002 (Page: 4-10/D-5)
PK303
RF Y
REC
GND
MESECAM
RF CHROMA
TRICK
REC CHROMA
TO LUMINANCE & CHROMINANCE SECTION PP3003 (Page: 4-10/D-5)
PK302-ⓐ REC/PLAY 5.0Vp-p (V-RATE)
PK302-ⓑ PLAY 0.3Vp-p (V-RATE)
PK303-ⓐ PLAY 0.3Vp-p (V-RATE)
L308 VLP0099
QR305 MRN1404 (NTSC ON)
Q304 MSB709 (EDIT OFF)
D301 1SS254
D803 1SS254
Q804 MSD601 (AMP)
QR807 MRN1403 (EE ON)
QR803 MRN1404 (MESECAM ON)
QR306 IMH5 (LP ON) (SP ON)
QR307 IMH5 (LP ON) (EE ON)
QR805 MRN1403 (LP ON)
D801 1SS254
D802 1SS254
L305 100μ
C322 6V100
IC302-ⓐ REC 0.8Vp-p (V-RATE)
IC302-ⓑ REC/PLAY 4.8Vp-p (H-RATE)
IC 302 VEFH14D
IC302-ⓒ REC/PLAY 0.9Vp-p (H-RATE)
IC302-ⓓ PLAY 0.5Vp-p (V-RATE)
IC302-ⓔ PLAY 0.9Vp-p (H-RATE)
IC302-ⓕ REC/PLAY 2.4Vp-p (H-RATE)
IC302-ⓖ REC/PLAY 1.0Vp-p (H-RATE)
BH7505CK1
DOC
YNR
CLP
DET
MIX
NLDE
W. EX
AMP
AGC
LOG
MUTE
SCL
Y/C. MIX
Y. LPF
PICT
NC2
NC
HP. LIM
KP
HSS
LPF
REC PB
NLE
DE
BIAS
CL
W/D C
MOD
ME
S/P/N
FIL-CR
CORR
NR BIAS
ACK
CNR
CNR
EDIT
COMB. AMP
630K BPF
4.43M B.P.F.
B.D.E.
COMB. D
B. GEN
BGP
DET
ACC
ACK
C. ACC
630K LPF
M BM B.E
5.06M BPF
LIM
HP LIM
S.BM
DEM
DO
ENV
ROTARY
D.M.M
A F C
(CMOS)
S.LOCK
DET
KILL
ID
90°
VXCO
X2
V.VCC
V.REG
C.VCC1
C.VCC2
Y.VCC2
D.VCC
VDD
ITO
LP SP
REC PB BID
B.G. P.
D.GND
COL B/W NOR
Q801 MSD601 (AMP)
2SC3931
X801 VSX0129
L813 100μ
1 2 3 4 5 6 7 8 9 10 11 12
H G F E D C B A

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

ATIC DIAGRAM

EC MODE —— MAIN SIGNAL PATH IN PLAYBACK MODE


Q302
MSB709
(BUFFER)
VR301
1KB
Y. BALANCE
DL801
EFDUN124A13N
1H DELAY
VR801
1KB
CHROMA BALANCE
IC 302
VEFH14D
BH7505CK1
Q801
MSD601
(AMP)
IC801
M52352FP
DL802
VLD0198
2H DELAY
1H DELAY
GCA
6dB AMP
LOGIC
HD MMV
fH VCO
P.D
SH CONT
B.G.P. MMV
1/2
2SC3931
QR303
MRN1404
(NTSC Ⓝ:ON)
QR801
MRN2404
(NTSC Ⓝ:ON)
Q303
MSC2295
(AMP)
QR301
DTC363EK
(BUFFER)
QR304
MRN1403
(S-VHS Ⓢ:ON)
Q805
MSD601
(S-VHS Ⓢ:ON)
QR805
MRN1403
(LP Ⓛ:ON)
PP804
1 E. REC 5V
2 RF Y IN
3 GND
4 S-VHS Ⓢ
5 RF Y OUT
TO PS5001
(Page: 4-24/B-5)
S-VHS P.B. PACK C.B.A.
(VEP03920A)
IC302-⑫ REC/PLAY
0.9Vp-p (H-RATE)
IC302-⑮ PLAY
0.9Vp-p (H-RATE)
IC302-⑮ PLAY
0.5Vp-p (V-RATE)
IC302-⑮ REC/PLAY
2.4Vp-p (H-RATE)
IC302-⑮ REC/PLAY
1.0Vp-p (H-RATE)
IC302-㊷ REC
0.8Vp-p (V-RATE)
IC302-㊷ REC/PLAY
4.8Vp-p (H-RATE)
IC302-㉕ REC
0.7Vp-p (H-RATE)
IC302-㉙ REC/PLAY
5.0Vp-p (V-RATE)
IC302-㉚ REC
2.7MHz
B - LINE

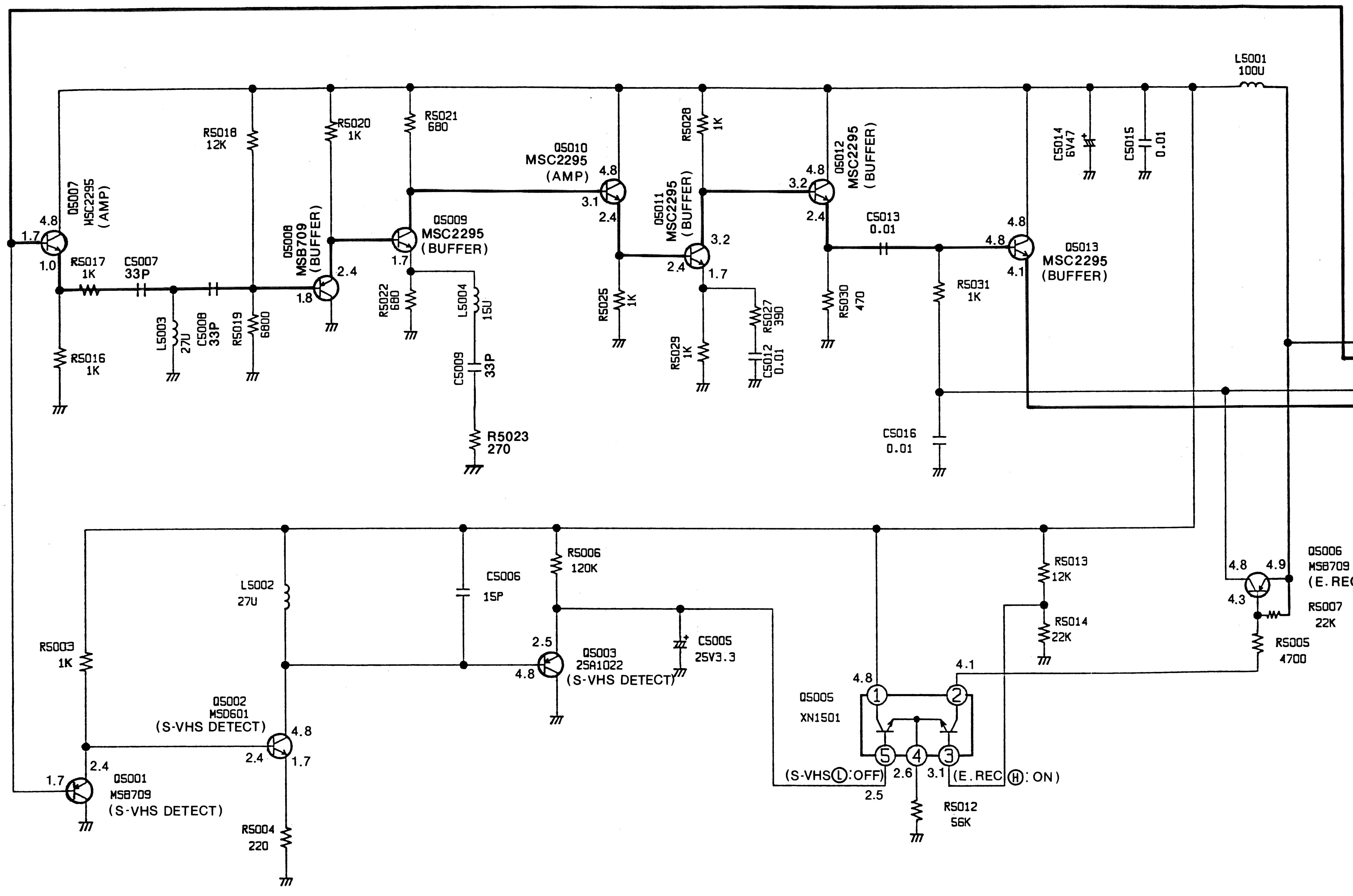
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

5 6 7 8 9 10 11 12 13 14 15 16 17

4-7. S-VHS P.B. PACK SCHEMATIC DIAGRAM

—— MAIN SIGNAL PATH IN PLAYBACK MODE



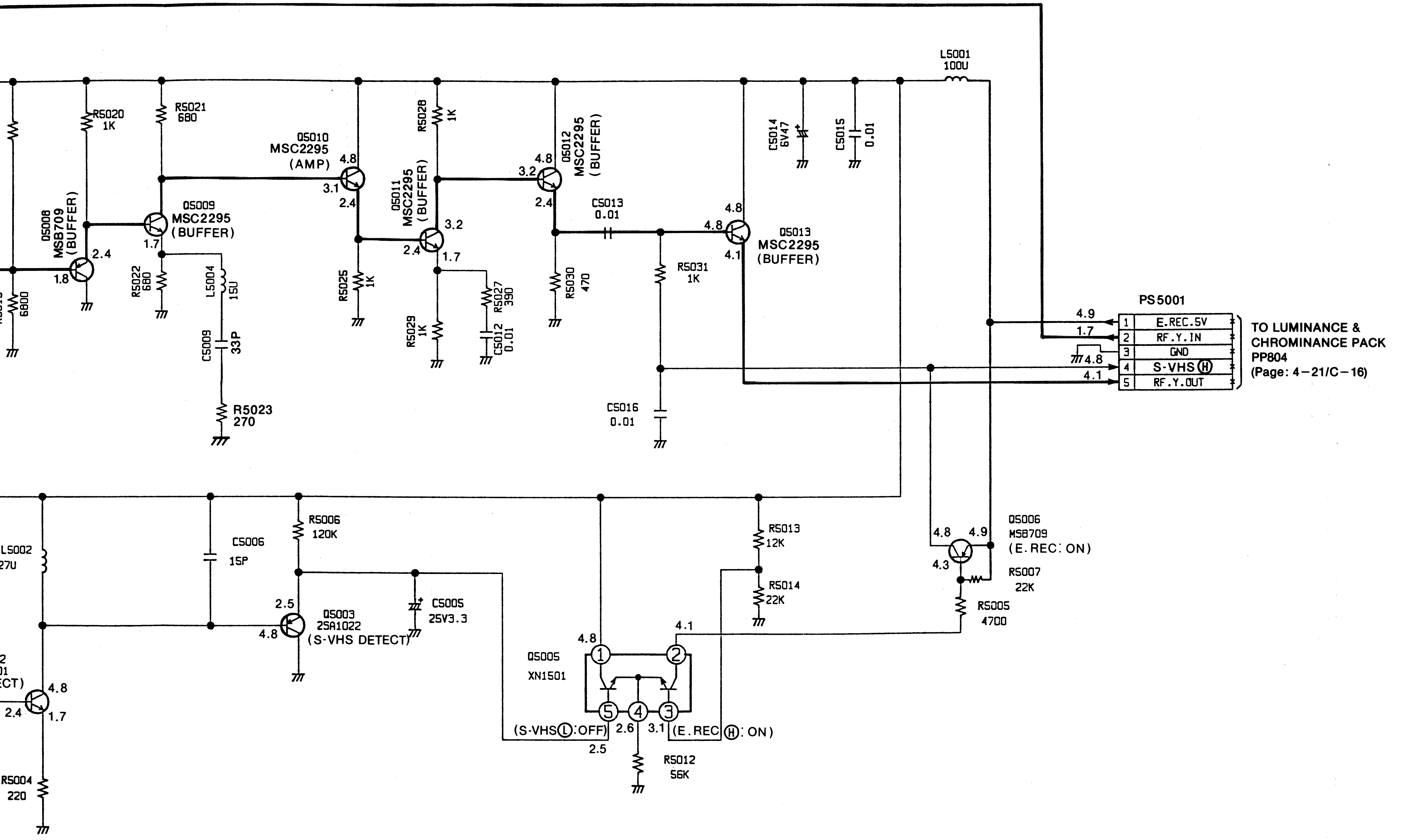
C
B
A
L5001
100U
R5018
12K
R5020
1K
R5021
680
Q5010
MSC2295
(AMP)
R5028
1K
Q5012
MSC2295
(BUFFER)
C5014
6V47
C5015
0.01
Q5007
MSC2295
(AMP)
Q5008
MSB709
(BUFFER)
Q5009
MSC2295
(BUFFER)
Q5011
MSC2295
(BUFFER)
C5013
0.01
Q5013
MSC2295
(BUFFER)
R5017
1K
C5007
33P
L5003
27U
C5008
33P
R5019
6800
R5022
680
L5004
15U
R5025
1K
R5027
390
C5012
0.01
R5029
1K
R5030
470
R5031
1K
R5016
1K
C5009
33P
R5023
270
C5016
0.01
4.8
1.7
1.0
1.8
2.4
1.7
3.1
2.4
4.8
2.4
3.2
1.7
3.2
4.8
2.4
4.8
4.8
4.1
L5002
27U
C5006
15P
R5006
120K
R5013
12K
Q5006
MSB709
(E.REC
R5007
22K
R5014
22K
R5005
4700
R5003
1K
Q5003
2SA1022
(S-VHS DETECT)
C5005
25V3.3
2.5
4.8
Q5005
XN1501
4.8
4.1
4.8
4.9
4.3
Q5002
MSD601
(S-VHS DETECT)
4.8
2.4
1.7
Q5001
MSB709
(S-VHS DETECT)
1.7
2.4
R5004
220
①
②
③
④
⑤
(S-VHSⓁ:OFF)
2.6
3.1
(E.RECⒽ:ON)
2.5
R5012
56K
1
2
3
4

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS D
WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)

TIC DIAGRAM

—— MAIN SIGNAL PATH IN PLAYBACK MODE

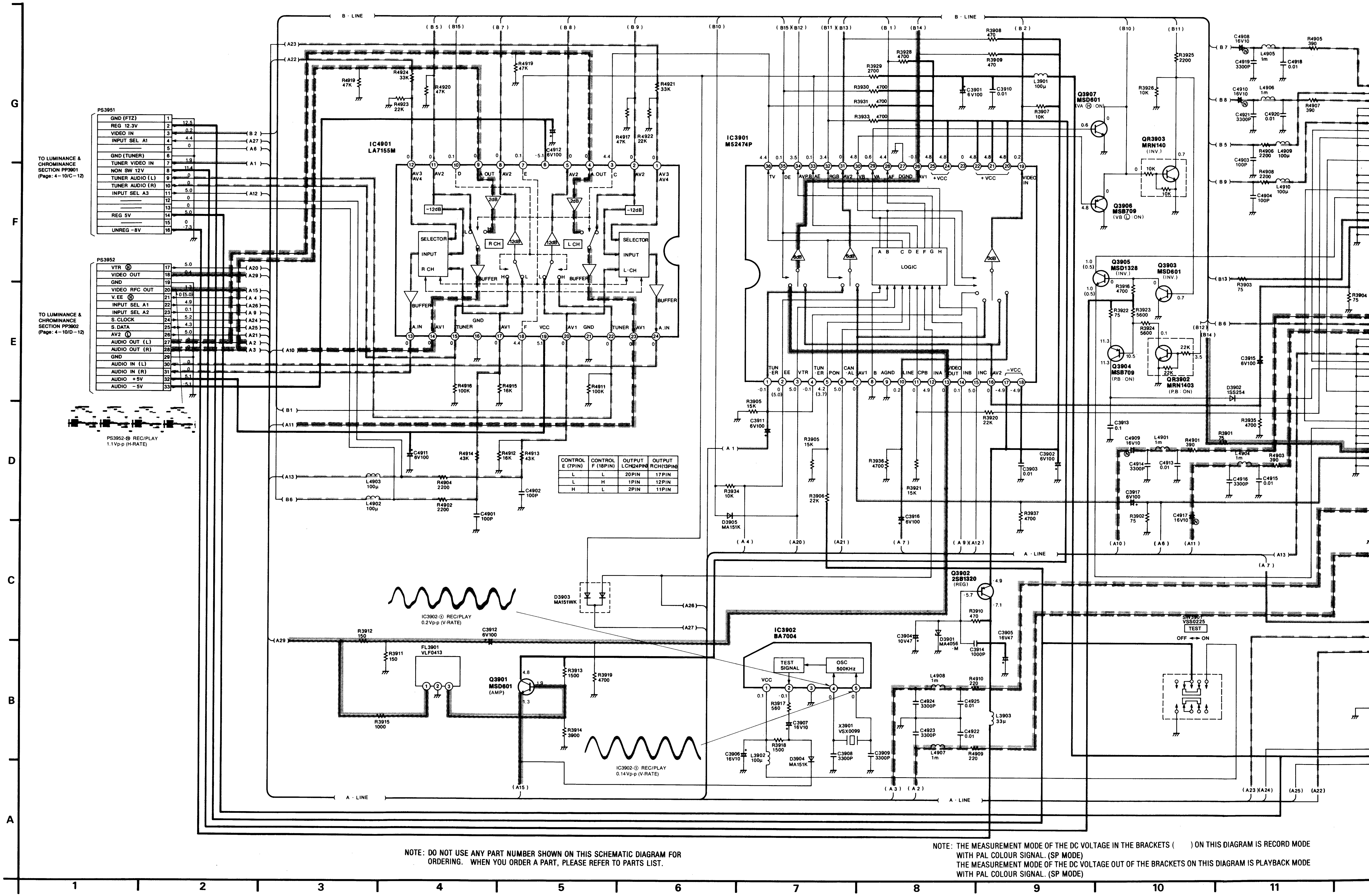

L5001
100U
R5020
1K
R5021
680
Q5010
MSC2295
(AMP)
R5028
1K
Q5012
MSC2295
(BUFFER)
C5014
6V47
C5015
0.01
Q5008
MSB709
(BUFFER)
Q5009
MSC2295
(BUFFER)
Q5011
MSC2295
(BUFFER)
C5013
0.01
Q5013
MSC2295
(BUFFER)
R5022
680
L5004
15U
R5025
1K
R5027
390
R5030
470
R5031
1K
6800
C5009
33P
R5029
1K
C5012
0.01
PS5001
1 E.REC.5V
2 RF.Y.IN
3 GND
4 S-VHS Ⓗ
5 RF.Y.OUT
TO LUMINANCE & CHROMINANCE PACK PP804 (Page: 4−21/C−16)
R5023
270
C5016
0.01
L5002
27U
C5006
15P
R5006
120K
C5005
25V3.3
Q5003
2SA1022
(S-VHS DETECT)
R5013
12K
R5014
22K
Q5006
MSB709
(E.REC: ON)
R5007
22K
R5005
4700
Q5005
XN1501
(S-VHS Ⓛ: OFF)
(E.REC Ⓗ: ON)
R5012
56K
ECT)
R5004
220
4.8
3.1
2.4
3.2
1.7
2.4
1.8
4.9
4.1
4.3
2.5
2.6
2
3
4
5
6

T NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR
U ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)

4-8. INPUT/OUTPUT PACK SCHEMATIC DIAGRAM

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC M
AUDIO MAIN SIGNAL PATH IN PLAY



B · LINE
A · LINE
PS3951
GND (FTZ)
REG 12.3V
VIDEO IN
INPUT SEL A1
GND (TUNER)
TUNER VIDEO IN
NON SW 12V
TUNER AUDIO (L)
TUNER AUDIO (R)
INPUT SEL A3
REG 5V
UNREG -8V
TO LUMINANCE & CHROMINANCE SECTION PP3901 (Page: 4-10/C-12)
PS3952
VTR Ⓗ
VIDEO OUT
GND
VIDEO RFC OUT
V.EE Ⓗ
INPUT SEL A1
INPUT SEL A2
S.CLOCK
S.DATA
AV2 Ⓛ
AUDIO OUT (L)
AUDIO OUT (R)
GND
AUDIO IN (L)
AUDIO IN (R)
AUDIO +5V
AUDIO -5V
TO LUMINANCE & CHROMINANCE SECTION PP3902 (Page: 4-10/D-12)
PS3952-⑱ REC/PLAY 1.1Vp-p (H-RATE)
IC4901 LA7155M
SELECTOR
INPUT
R CH
L CH
BUFFER
-12dB
12dB
2dB
A.IN
AV1
AV2
AV3 AV4
TUNER
GND
VCC
IC3901 M52474P
LOGIC
6dB
Q3907 MSD601 (VA Ⓗ · ON)
QR3903 MRN140 (INV.)
Q3906 MSB709 (VB Ⓛ · ON)
Q3905 MSD1328 (INV.)
Q3903 MSD601 (INV.)
Q3904 MSB709 (PB · ON)
QR3902 MRN1403 (P.B · ON)
Q3902 2SB1320 (REG)
IC3902 BA7004
TEST SIGNAL
OSC 500KHz
X3901 VSX0099
Q3901 MSD601 (AMP)
FL3901 VLF0413
D3903 MA151WK
D3905 MA151K
D3904 MA151K
D3901 MA4056-M
D3902 1SS254
SW3901 VSS0225
TEST
OFF ↔ ON
IC3902-⑤ REC/PLAY 0.2Vp-p (V-RATE)
IC3902-⑤ REC/PLAY 0.14Vp-p (V-RATE)
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11

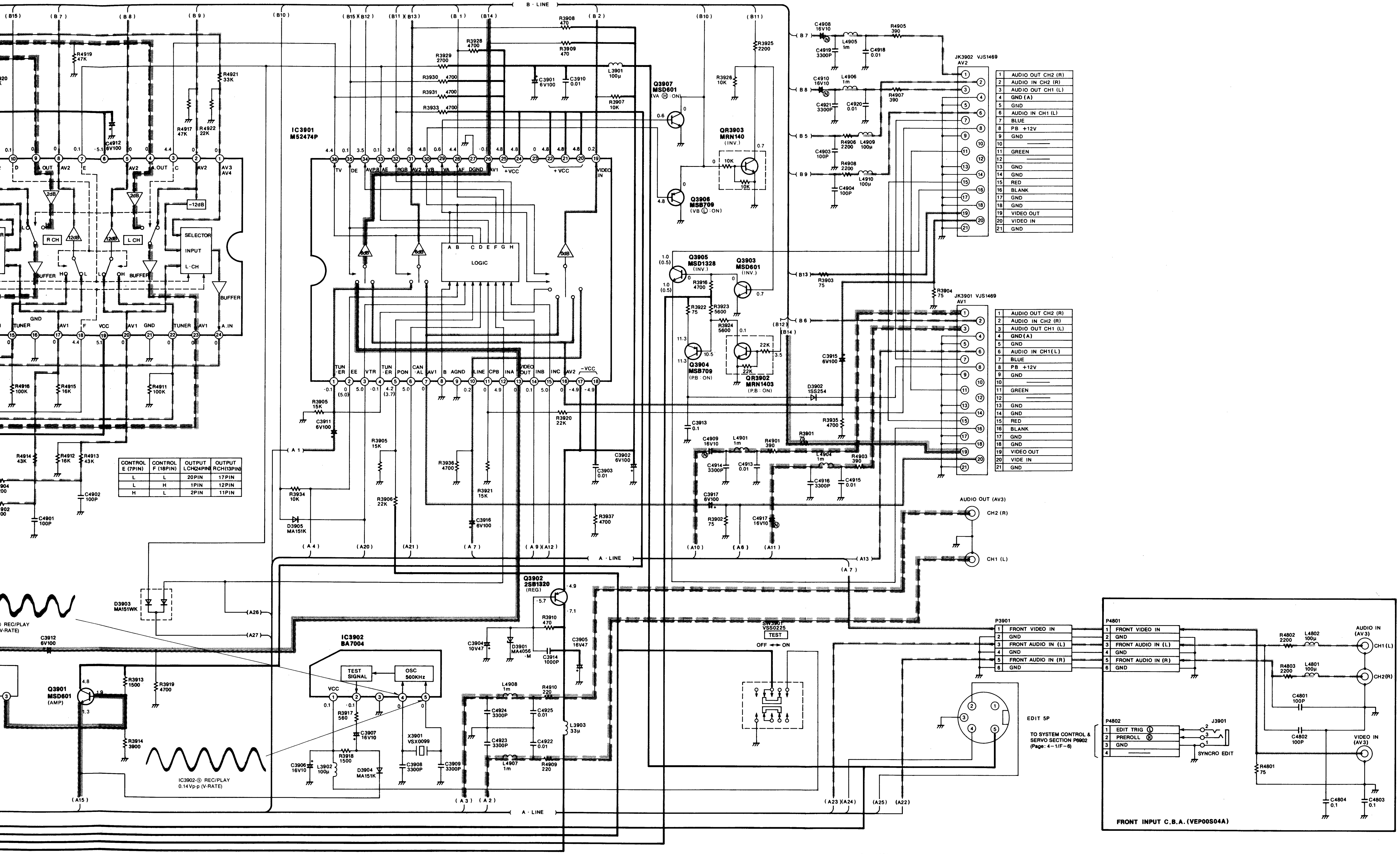
CONTROL E (7PIN)	CONTROL F (18PIN)	OUTPUT LCH(24PIN)	OUTPUT RCH(13PIN)
L	L	20PIN	17PIN
L	H	1PIN	12PIN
H	L	2PIN	11PIN

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

RAM

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE


B · LINE
A · LINE
IC3901
M52474P
IC3902
BA7004
TEST SIGNAL
OSC 500KHz
LOGIC
SELECTOR
INPUT
L·CH
BUFFER
R CH
L CH
TUNER
Q3901
MSD601
(AMP)
Q3902
2SB1320
(REG)
Q3903
MSD601
(INV.)
Q3904
MSB709
(PB : ON)
Q3905
MSD1328
(INV.)
Q3906
MSB709
(VB Ⓛ : ON)
Q3907
MSD601
(VA Ⓗ : ON)
QR3902
MRN1403
(P.B : ON)
QR3903
MRN140
(INV.)
D3901
MA4056-M
D3902
1SS254
D3903
MA151WK
D3904
MA151K
D3905
MA151K
X3901
VSX0099
SW3901
VSS0225
TEST
OFF ◄─► ON
IC3902-⑤ REC/PLAY
0.14Vp-p (V-RATE)
REC/PLAY
(V-RATE)
JK3902 VJS1469
AV2
JK3901 VJS1469
AV1
AUDIO OUT (AV3)
CH2 (R)
CH1 (L)
AUDIO IN (AV3)
CH1 (L)
CH2 (R)
VIDEO IN (AV3)
EDIT 5P
P3901
P4801
P4802
J3901
SYNCRO EDIT
TO SYSTEM CONTROL & SERVO SECTION P6902 (Page: 4-1/F-6)
FRONT INPUT C.B.A. (VEP00S04A)
5
6
7
8
9
10
11
12
13
14
15

CONTROL E (7PIN)	CONTROL F (18PIN)	OUTPUT LCH(24PIN)	OUTPUT RCH(13PIN)
L	L	20PIN	17PIN
L	H	1PIN	12PIN
H	L	2PIN	11PIN

JK3902 VJS1469
AV2

1	AUDIO OUT CH2 (R)
2	AUDIO IN CH2 (R)
3	AUDIO OUT CH1 (L)
4	GND (A)
5	GND
6	AUDIO IN CH1 (L)
7	BLUE
8	PB +12V
9	GND
10	———
11	GREEN
12	———
13	GND
14	GND
15	RED
16	BLANK
17	GND
18	GND
19	VIDEO OUT
20	VIDEO IN
21	GND

JK3901 VJS1469
AV1

1	AUDIO OUT CH2 (R)
2	AUDIO IN CH2 (R)
3	AUDIO OUT CH1 (L)
4	GND(A)
5	GND
6	AUDIO IN CH1(L)
7	BLUE
8	PB +12V
9	GND
10	———
11	GREEN
12	———
13	GND
14	GND
15	RED
16	BLANK
17	GND
18	GND
19	VIDEO OUT
20	VIDE IN
21	GND

P3901

1	FRONT VIDEO IN
2	GND
3	FRONT AUDIO IN (L)
4	GND
5	FRONT AUDIO IN (R)
6	GND

P4801

1	FRONT VIDEO IN
2	GND
3	FRONT AUDIO IN (L)
4	GND
5	FRONT AUDIO IN (R)
6	GND

P4802

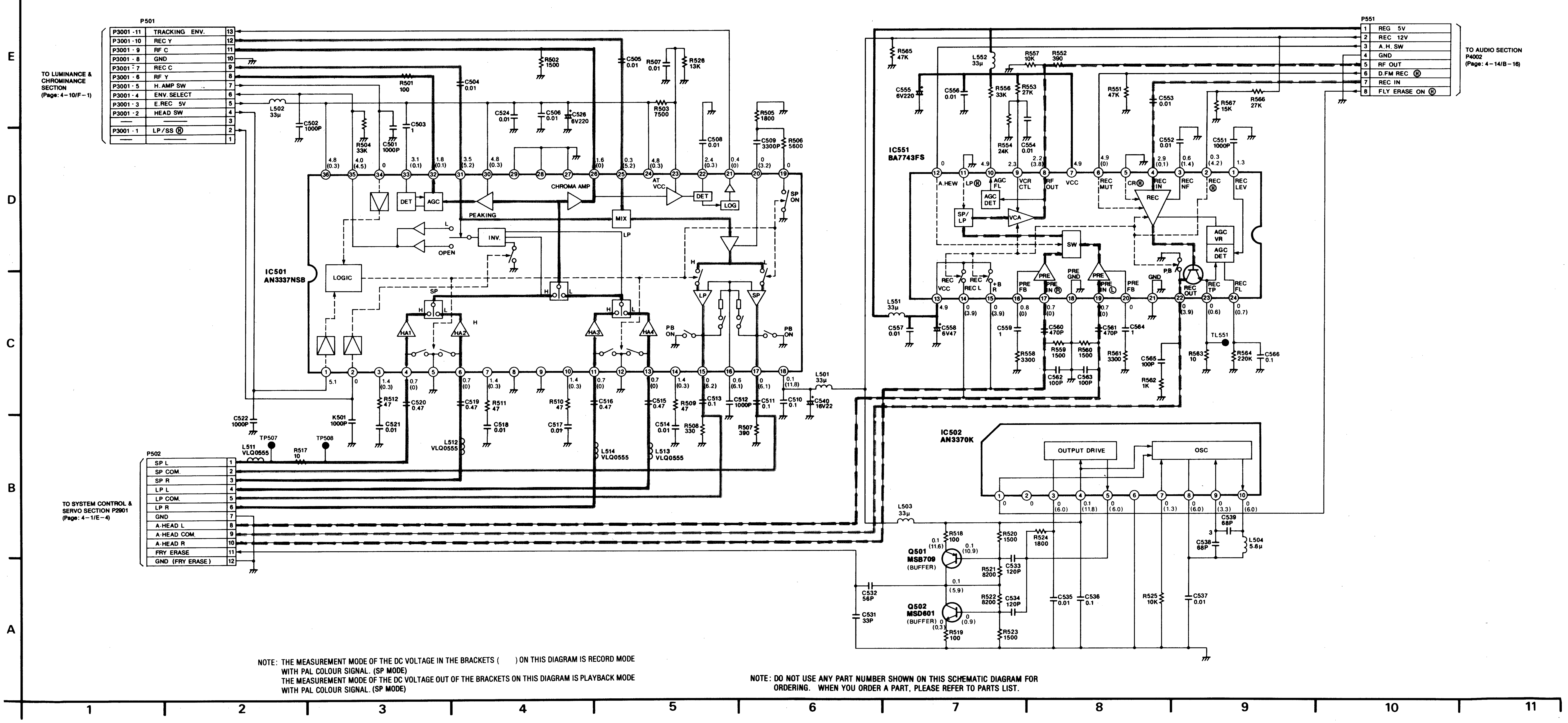
1	EDIT TRIG Ⓛ
2	PREROLL Ⓗ
3	GND
4	———

IOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR
ERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

4-9. HEAD AMP SCHEMATIC DIAGRAM

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
Hi-Fi AUDIO MAIN SIGNAL PATH IN REC MODE
Hi-Fi AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

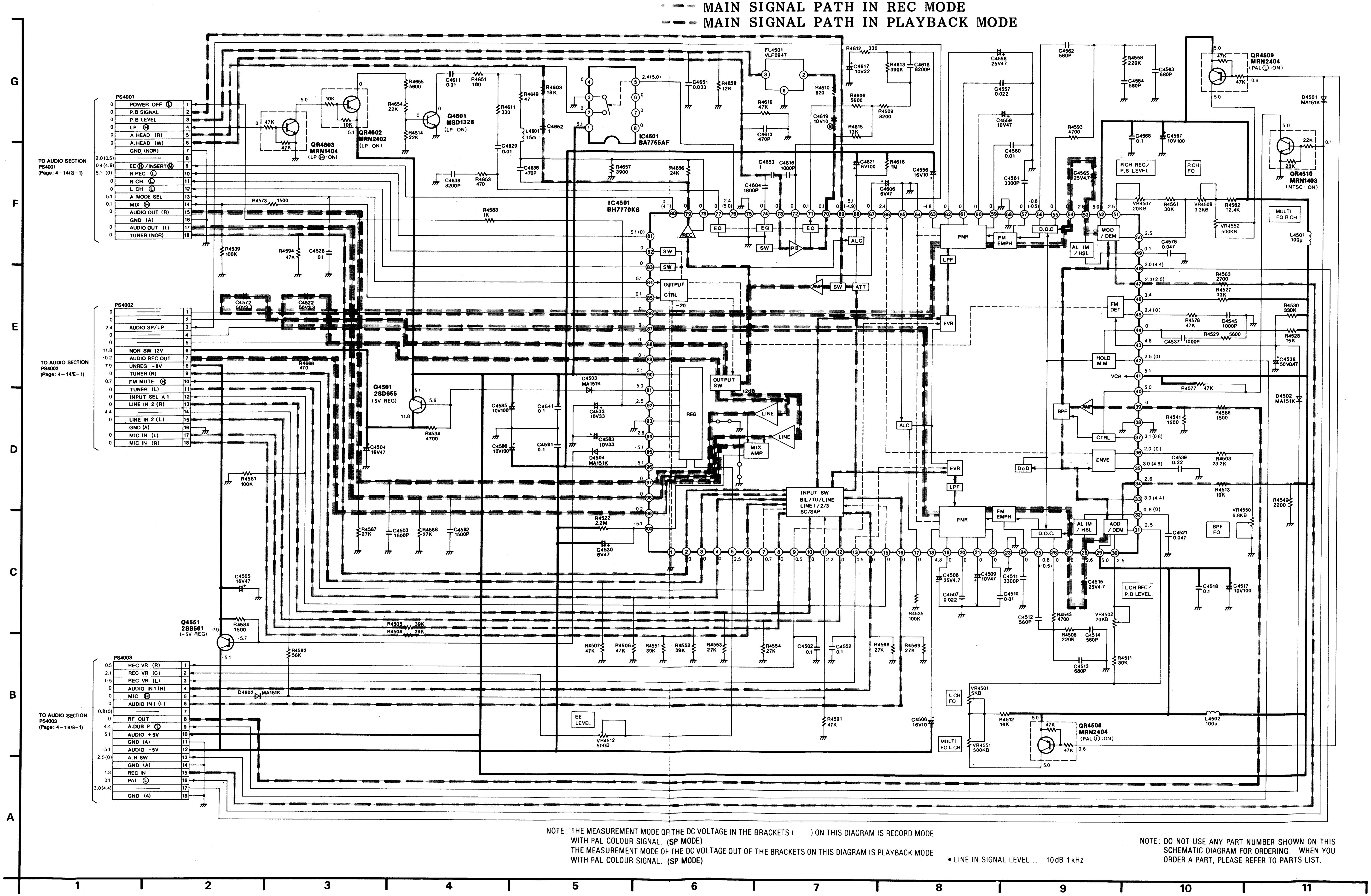


E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
P501
TO LUMINANCE & CHROMINANCE SECTION (Page: 4-10/F-1)
P3001-11 TRACKING ENV. 13
P3001-10 REC Y 12
P3001-9 RF C 11
P3001-8 GND 10
P3001-7 REC C 9
P3001-6 RF Y 8
P3001-5 H. AMP SW 7
P3001-4 ENV. SELECT 6
P3001-3 E.REC 5V 5
P3001-2 HEAD SW 4
3
P3001-1 LP/SS Ⓡ 2
1
IC501
AN3337NSB
LOGIC
DET
AGC
PEAKING
CHROMA AMP
INV.
OPEN
MIX
LP
AT VCC
DET
LOG
SP ON
PB ON
HA1
HA2
HA3
HA4
SP
LP
H
L
R502 1500
R501 100
C504 0.01
C505 0.01
R507 0.01
R526 13K
C524 0.01
C506 0.01
C526 6V220
R503 7500
R505 1800
C508 0.01
C509 3300P
R506 5600
L502 33µ
C502 1000P
R504 33K
C501 1000P
C503 1
R512 47
C520 0.47
C521 0.01
C519 0.47
R511 47
C518 0.01
R510 47
C516 0.47
C517 0.01
C515 0.47
R509 47
C514 0.01
R508 330
C513 0.1
C512 1000P
C511 0.1
R507 390
C510 0.1
C540 16V22
L501 33µ
C522 1000P
K501 1000P
TP507
TP508
L511 VLQ0555
R517 10
L512 VLQ0555
L514 VLQ0555
L513 VLQ0555
P502
TO SYSTEM CONTROL & SERVO SECTION P2901 (Page: 4-1/E-4)
SP L 1
SP COM. 2
SP R 3
LP L 4
LP COM. 5
LP R 6
GND 7
A-HEAD L 8
A-HEAD COM. 9
A-HEAD R 10
FRY ERASE 11
GND (FRY ERASE) 12
P551
TO AUDIO SECTION P4002 (Page: 4-14/B-16)
1 REG 5V
2 REC 12V
3 A.H. SW
4 GND
5 RF OUT
6 D.FM REC Ⓡ
7 REC IN
8 FLY ERASE ON Ⓡ
IC551
BA7743FS
A.HEW
LP Ⓡ
AGC FL
VCR CTL
RF OUT
VCC
REC MUT
CR Ⓡ
REC IN
REC NF
REC Ⓡ
REC LEV
AGC DET
SP/LP
VCA
SW
REC
AGC VR
AGC DET
REC VCC
REC L
+B R
PRE FB
PRE IN Ⓡ
PRE GND
PRE IN Ⓛ
PRE FB
GND
PB
REC OUT
REC TP
REC FL
R565 47K
L552 33µ
R557 10K
R552 390
C555 6V220
C556 0.01
R556 33K
R553 27K
R554 24K
C554 0.01
R551 47K
C553 0.01
R567 15K
R566 27K
C552 0.01
C551 1000P
L551 33µ
C557 0.01
C558 6V47
C559 1
C560 470P
R558 3300
R559 1500
R560 1500
C562 100P
C563 100P
C561 470P
R561 3300
C564 1
C565 100P
R562 1K
R563 10
TL551
R564 220K
C566 0.1
IC502
AN3370K
OUTPUT DRIVE
OSC
L503 33µ
R518 100
Q501
MSB709
(BUFFER)
R520 1500
R524 1800
R521 8200
C533 120P
C532 56P
C531 33P
Q502
MSD601
(BUFFER)
R519 100
R522 8200
C534 120P
R523 1500
C535 0.01
C536 0.1
R525 10K
C537 0.01
C539 68P
C538 68P
L504 5.6µ

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-10. Hi-Fi AUDIO PACK SCHEMATIC DIAGRAM



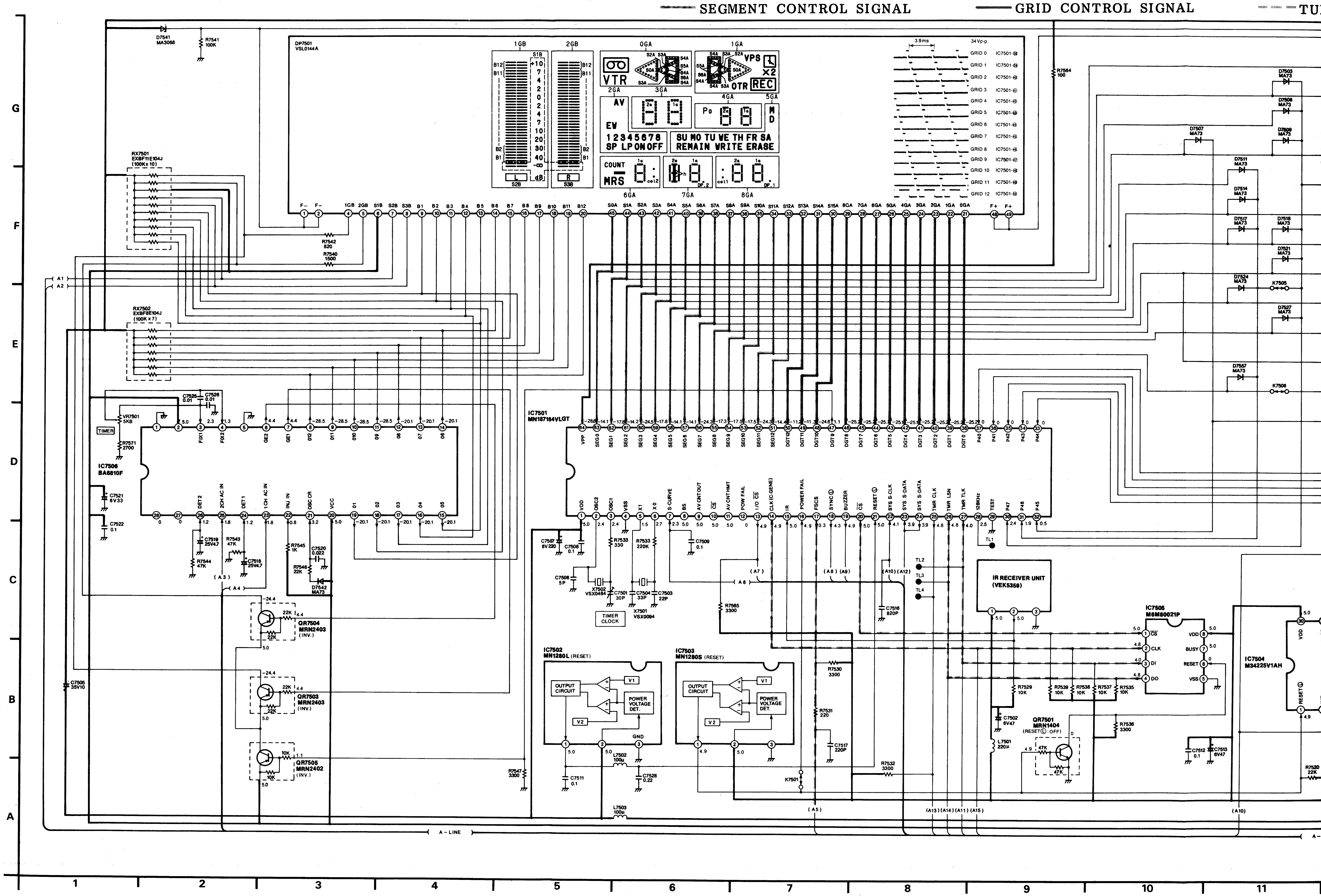
MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
TO AUDIO SECTION PS4001 (Page: 4-14/G-1)
PS4001
POWER OFF Ⓛ
P.B SIGNAL
P.B LEVEL
LP Ⓗ
A.HEAD (R)
A.HEAD (W)
GND (NOR)
EE Ⓗ / INSERT Ⓗ
N.REC Ⓛ
R CH Ⓛ
L CH Ⓛ
A.MODE SEL
MIX Ⓗ
AUDIO OUT (R)
GND (A)
AUDIO OUT (L)
TUNER (NOR)
TO AUDIO SECTION PS4002 (Page: 4-14/E-1)
PS4002
AUDIO SP/LP
NON SW 12V
AUDIO RFC OUT
UNREG -8V
TUNER (R)
FM MUTE Ⓗ
TUNER (L)
INPUT SEL A 1
LINE IN 2 (R)
LINE IN 2 (L)
GND (A)
MIC IN (L)
MIC IN (R)
TO AUDIO SECTION PS4003 (Page: 4-14/B-1)
PS4003
REC VR (R)
REC VR (C)
REC VR (L)
AUDIO IN 1 (R)
MIC Ⓗ
AUDIO IN 1 (L)
RF OUT
A.DUB P Ⓛ
AUDIO +5V
GND (A)
AUDIO -5V
A.H SW
GND (A)
REC IN
PAL Ⓛ
GND (A)
QR4603 MRN1404 (LP Ⓗ : ON)
QR4602 MRN2402 (LP : ON)
Q4601 MSD1328 (LP : ON)
IC4601 BA7755AF
FL4501 VLF0947
IC4501 BH7770KS
Q4501 2SD655 (5V REG)
Q4551 2SB561 (-5V REG)
QR4509 MRN2404 (PAL Ⓛ : ON)
QR4510 MRN1403 (NTSC : ON)
QR4508 MRN2404 (PAL Ⓛ : ON)
D4501 MA151K
D4502 MA151K
D4503 MA151K
D4504 MA151K
D4602 MA151K
L4501 100μ
L4502 100μ
L4601 15m
EQ
SW
PB
REC
ALC
OUTPUT CTRL
OUTPUT SW
REG
LINE
MIX AMP
AMP
ATT
EVR
LPF
PNR
FM EMPH
D.O.C.
AL IM / HSL
MOD / DEM
ADD / DEM
FM DET
HOLD M M
BPF
CTRL
ENVE
DoD
INPUT SW BIL/TU/LINE LINE1/2/3 SC/SAP
RCH REC/ P.B LEVEL
R CH FO
L CH REC/ P.B LEVEL
L CH FO
MULTI FO R CH
MULTI FO L CH
BPF FO
EE LEVEL
VCB
12dB
-20
R4655 5600
C4611 0.01
R4651 100
R4654 22K
R4514 22K
R4611 330
R4649 47
R4603 18K
C4652 1
C4629 0.01
C4636 470P
C4638 8200P
R4653 470
C4651 0.033
R4659 12K
R4610 47K
R4613 470P
R4612 330
C4617 10V22
R4613 390K
C4618 8200P
R4510 620
R4606 5600
R4509 8200
C4619 10V10
R4615 13K
C4621 6V100
R4616 1M
C4556 16V10
C4653 1
C4616 1000P
C4604 1800P
C4606 6V47
R4657 3900
R4656 24K
C4558 25V47
C4557 0.022
C4559 10V47
C4560 0.01
C4561 3300P
C4562 560P
R4593 4700
R4558 220K
C4564 560P
C4563 680P
C4568 0.1
C4567 10V100
C4565 25V4.7
VR4507 20KB
R4561 30K
VR4509 3.3KB
R4562 12.4K
VR4552 500KB
C4576 0.047
R4563 2700
R4527 33K
R4578 47K
C4545 1000P
R4530 330K
C4537 1000P
R4529 5600
R4528 15K
C4538 50V0.47
R4577 47K
R4541 1500
R4586 1500
C4539 0.22
R4503 23.2K
R4513 10K
R4542 2200
VR4550 6.8KB
C4521 0.047
C4518 0.1
C4517 10V100
R4573 1500
R4583 1K
R4539 100K
R4594 47K
C4528 0.1
C4572 50V3.3
C4522 50V3.3
R4666 470
C4585 10V100
C4541 0.1
C4533 10V33
C4583 10V33
C4586 10V100
C4591 0.1
C4504 16V47
R4534 4700
R4581 100K
R4587 27K
C4503 1500P
R4588 27K
C4592 1500P
R4522 2.2M
C4530 6V47
C4505 16V47
R4584 1500
R4592 56K
R4505 39K
R4504 39K
R4507 47K
R4506 47K
R4551 39K
R4552 39K
R4553 27K
R4554 27K
C4502 0.1
C4552 0.1
R4568 27K
R4569 27K
R4535 100K
C4508 25V4.7
C4509 10V47
C4511 3300P
C4507 0.022
C4510 0.01
C4515 25V4.7
C4512 560P
R4543 4700
R4508 220K
C4514 560P
VR4502 20KB
C4513 680P
R4511 30K
R4591 47K
C4506 16V10
VR4501 5KB
VR4551 500KB
R4512 16K
VR4512 500B

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. **(SP MODE)**
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. **(SP MODE)**

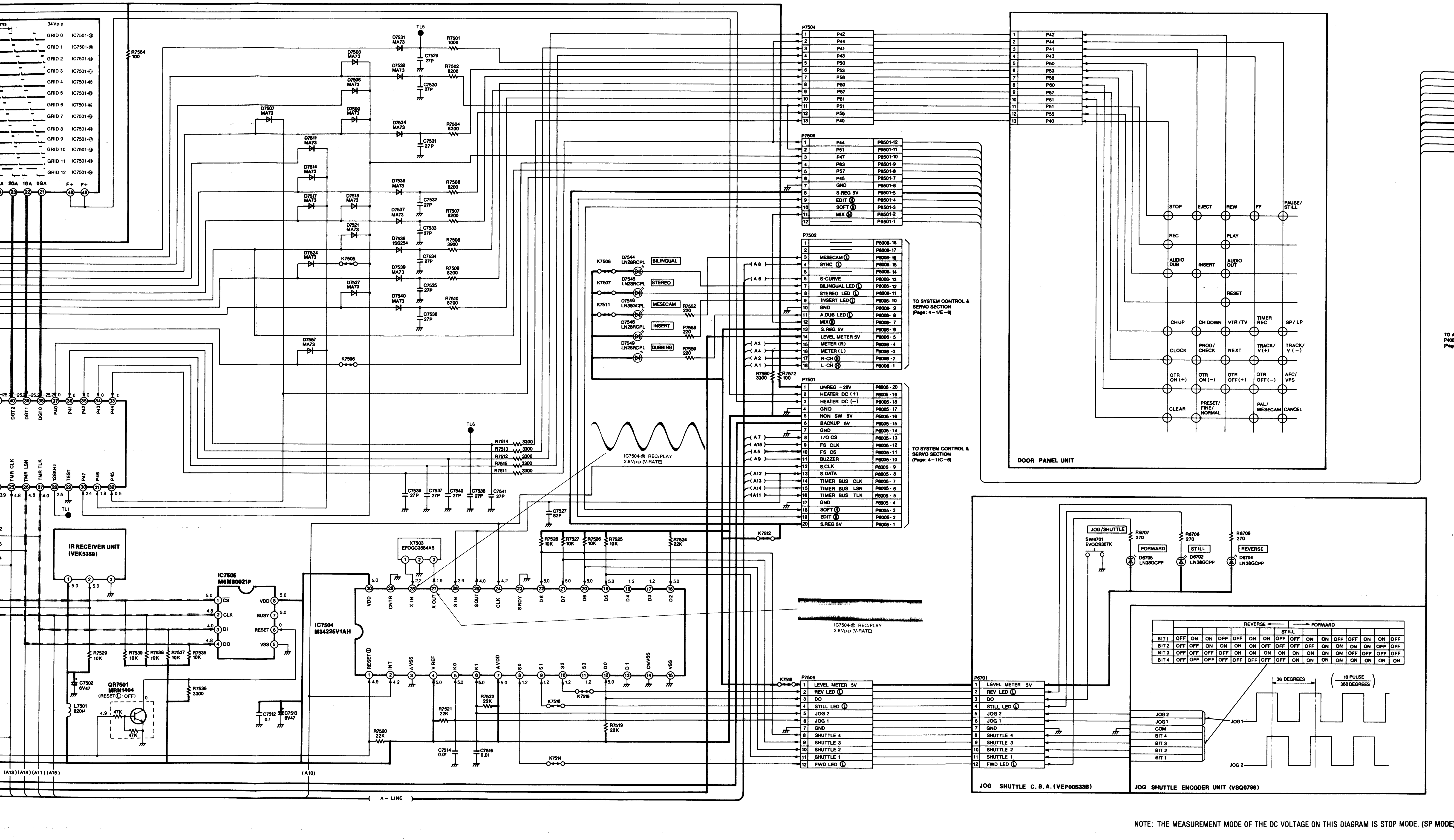
• LINE IN SIGNAL LEVEL… −10dB 1kHz

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-11. TIMER & VR SCHEMATIC DIAGRAM

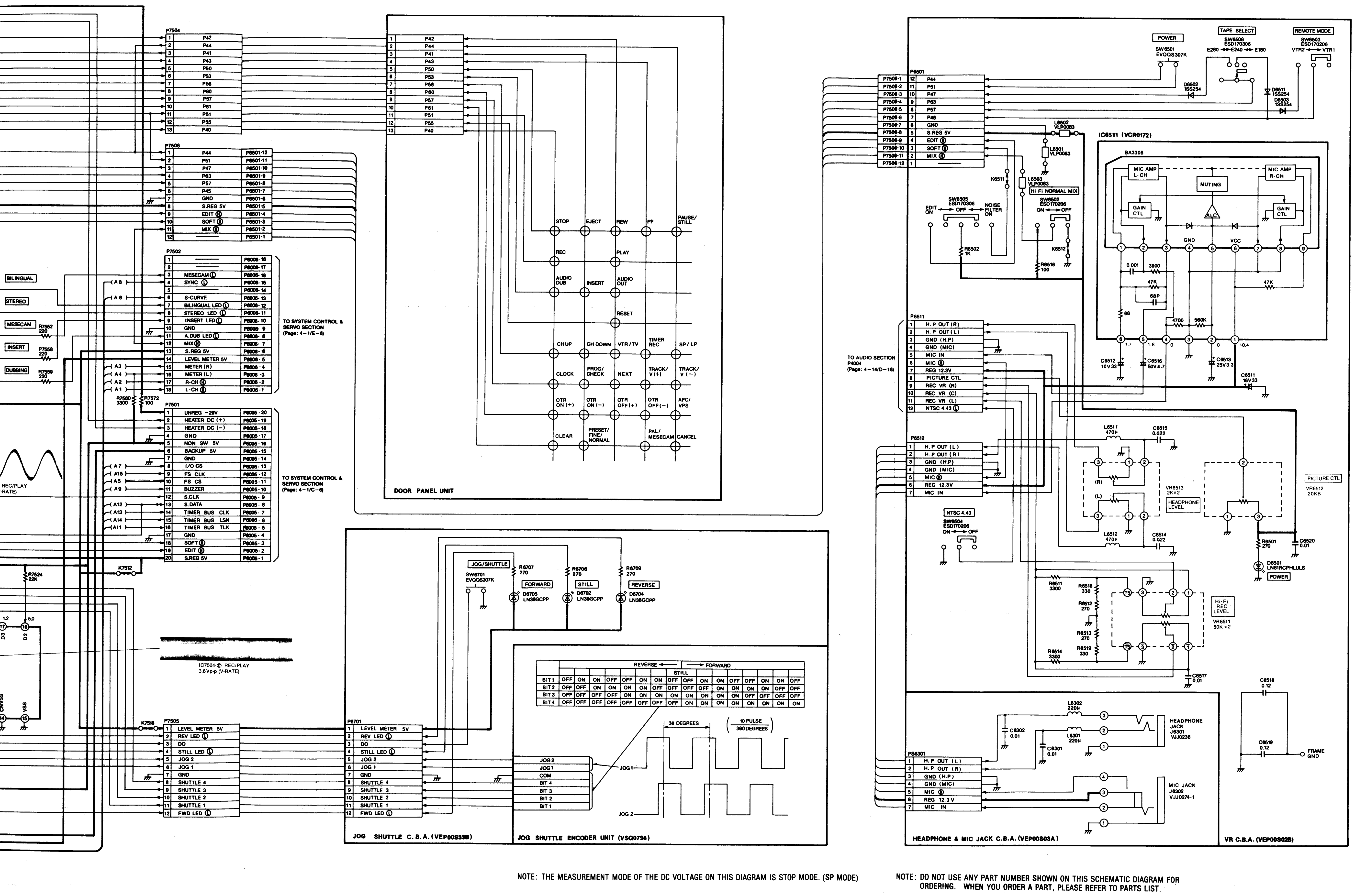

SEGMENT CONTROL SIGNAL
GRID CONTROL SIGNAL
TU
D7541 MA3068
R7541 100K
DP7501 VSL0144A
RX7501 EXBF11E104J (100K x 10)
RX7502 EXBF8E104J (100K x 7)
R7542 820
R7540 1500
R7564 100
VR7501 5KB
TIMER
R7571 2700
IC7506 BA6810F
C7521 6V33
C7522 0.1
C7525 0.01
C7526 0.01
C7519 25V4.7
R7543 47K
C7518 25V4.7
R7544 47K
R7545 1K
C7520 0.022
R7546 22K
D7542 MA73
QR7504 MRN2403 (INV.)
QR7503 MRN2403 (INV.)
QR7505 MRN2402 (INV.)
C7505 35V10
IC7501 MN187164VLGT
C7507 6V220
C7508 0.1
R7533 330
R7533 220K
C7509 0.1
C7506 5P
X7502 VSX0484
C7501 30P
C7504 33P
C7503 22P
X7501 VSX0094
TIMER CLOCK
R7565 3300
C7516 820P
TL1
TL2
TL3
TL4
IR RECEIVER UNIT (VEK5359)
IC7502 MN1280L (RESET)
IC7503 MN1280S (RESET)
OUTPUT CIRCUIT
POWER VOLTAGE DET.
GND
L7502 100μ
C7528 0.22
C7511 0.1
L7503 100μ
R7547 3300
K7501
R7530 3300
R7531 220
C7517 220P
R7532 3300
IC7505 M6M80021P
R7529 10K
R7539 10K
R7538 10K
R7537 10K
R7535 10K
R7536 3300
C7502 6V47
L7501 220μ
QR7501 MRN1404 (RESET(L): OFF)
IC7504 M34225V1AH
C7512 0.1
C7513 6V47
R7520 22K
D7503 MA73
D7506 MA73
D7507 MA73
D7509 MA73
D7511 MA73
D7514 MA73
D7517 MA73
D7518 MA73
D7521 MA73
D7524 MA73
K7505
D7527 MA73
D7557 MA73
K7506
A-LINE
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
11

―――GRID CONTROL SIGNAL　　- - - TUNE CONTROL SIGNAL


IC7504 M34225V1AH
IC7505 M6M80021P
IR RECEIVER UNIT (VEK5359)
X7503 EFOGC3584A5
QR7501 MRN1404 (RESET Ⓛ : OFF)
IC7504-㉗ REC/PLAY 2.8Vp-p (V-RATE)
IC7504-⑦ REC/PLAY 3.6Vp-p (V-RATE)
P7504
P7506
P7502
P7501
P7505
P6701
D7544 LN28RCPL BILINGUAL
D7545 LN28RCPL STEREO
D7546 LN38GCPL MESECAM
D7548 LN28RCPL INSERT
D7549 LN28RCPL DUBBING
TO SYSTEM CONTROL & SERVO SECTION (Page: 4-1/E-6)
TO SYSTEM CONTROL & SERVO SECTION (Page: 4-1/C-6)
STOP
EJECT
REW
FF
PAUSE/STILL
REC
PLAY
AUDIO DUB
INSERT
AUDIO OUT
RESET
CH UP
CH DOWN
VTR/TV
TIMER REC
SP/LP
CLOCK
PROG/CHECK
NEXT
TRACK/V(+)
TRACK/V(−)
OTR ON(+)
OTR ON(−)
OTR OFF(+)
OTR OFF(−)
AFC/VPS
CLEAR
PRESET/FINE/NORMAL
PAL/MESECAM
CANCEL
DOOR PANEL UNIT
JOG/SHUTTLE
SW6701 EVQQS307K
FORWARD
STILL
REVERSE
D6705 LN38GCPP
D6702 LN38GCPP
D6704 LN38GCPP
JOG SHUTTLE C.B.A. (VEP00S33B)
JOG SHUTTLE ENCODER UNIT (VSQ0798)
36 DEGREES
10 PULSE / 360 DEGREES
JOG 1
JOG 2
A- LINE
9
10
11
12
13
14
15
16
17
18
19
20

	REVERSE ←								→ FORWARD							
								STILL								
BIT 1	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF
BIT 2	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF
BIT 3	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF
BIT 4	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON	ON

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE. (SP MODE)

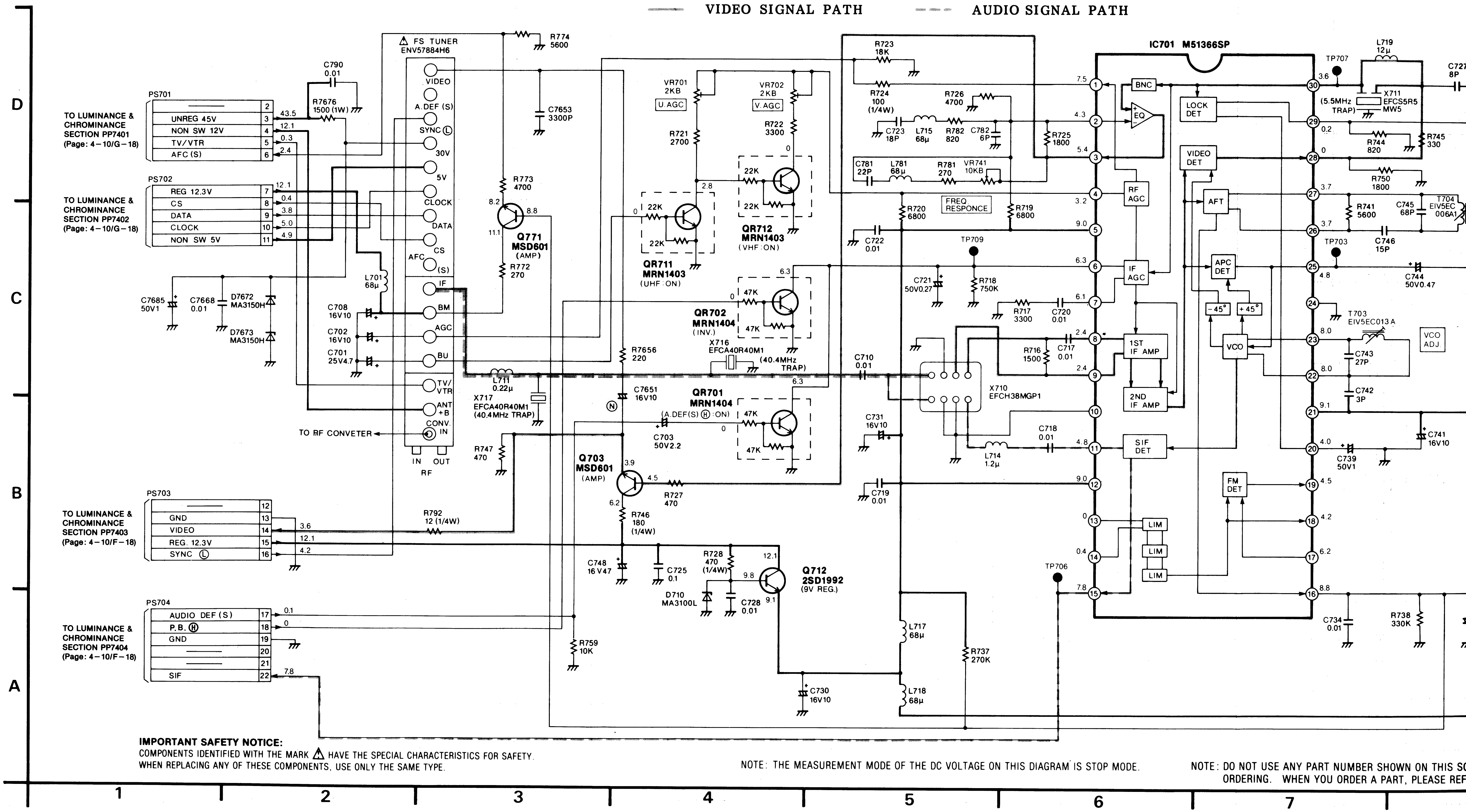

P7504
P7506
P7502
P7501
P7505
P6501
P6511
P6512
PS6301
P6701
BILINGUAL
STEREO
MESECAM
INSERT
DUBBING
TO SYSTEM CONTROL & SERVO SECTION (Page: 4-1/E-6)
TO SYSTEM CONTROL & SERVO SECTION (Page: 4-1/C-6)
REC/PLAY (V-RATE)
IC7504-⑰ REC/PLAY 3.6Vp-p (V-RATE)
DOOR PANEL UNIT
STOP
EJECT
REW
FF
PAUSE/STILL
REC
PLAY
AUDIO DUB
INSERT
AUDIO OUT
RESET
CH UP
CH DOWN
VTR/TV
TIMER REC
SP/LP
CLOCK
PROG/CHECK
NEXT
TRACK/V(+)
TRACK/V(-)
OTR ON(+)
OTR ON(-)
OTR OFF(+)
OTR OFF(-)
AFC/VPS
CLEAR
PRESET/FINE/NORMAL
PAL/MESECAM
CANCEL
JOG/SHUTTLE
SW6701 EVQQS307K
FORWARD
STILL
REVERSE
D6705 LN38GCPP
D6702 LN38GCPP
D6704 LN38GCPP
JOG SHUTTLE C.B.A. (VEP00S33B)
JOG SHUTTLE ENCODER UNIT (VSQ0798)
36 DEGREES
(10 PULSE / 360 DEGREES)
JOG 1
JOG 2
TO AUDIO SECTION P4004 (Page: 4-14/D-16)
POWER
SW6501 EVQQS307K
TAPE SELECT
SW6506 ESD170306
E260 ↔ E240 ↔ E180
REMOTE MODE
SW6503 ESD170206
VTR2 ↔ VTR1
IC6511 (VCR0172)
BA3308
MIC AMP L-CH
MIC AMP R-CH
MUTING
GAIN CTL
ALC
SW6505 ESD170306
EDIT ON ↔ OFF ↔ NOISE FILTER ON
Hi-Fi NORMAL MIX
SW6502 ESD170206
ON ↔ OFF
NTSC 4.43
SW6504 ESD170206
HEADPHONE LEVEL
VR6513 2K×2
PICTURE CTL
VR6512 20KB
Hi-Fi REC LEVEL
VR6511 50K×2
D6501 LN81RCPHLULS
POWER
HEADPHONE JACK J6301 VJJ0238
MIC JACK J6302 VJJ0274-1
FRAME GND
HEADPHONE & MIC JACK C.B.A. (VEP00S03A)
VR C.B.A. (VEP00S02B)
14
15
16
17
18
19
20
21
22
23
24

	REVERSE ←							→ FORWARD								
								STILL								
BIT 1	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF
BIT 2	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF
BIT 3	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF
BIT 4	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON	ON

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE. (SP MODE)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-12. TV DEMODULATOR PACK SCHEMATIC DIAGRAM

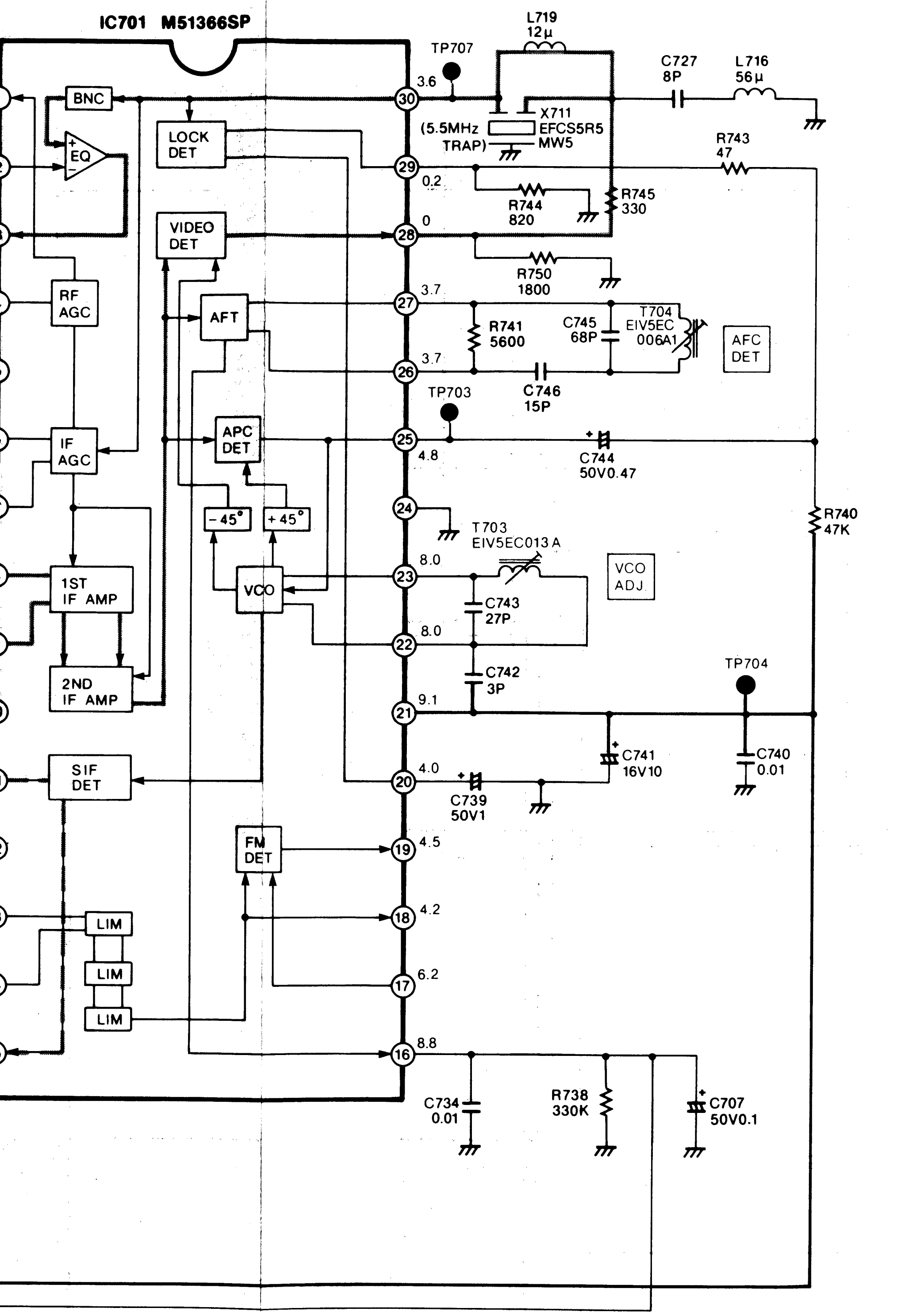

VIDEO SIGNAL PATH
AUDIO SIGNAL PATH
D
C
B
A
1
2
3
4
5
6
7
TO LUMINANCE & CHROMINANCE SECTION PP7401 (Page: 4−10/G−18)
PS701
UNREG 45V
NON SW 12V
TV/VTR
AFC (S)
TO LUMINANCE & CHROMINANCE SECTION PP7402 (Page: 4−10/G−18)
PS702
REG 12.3V
CS
DATA
CLOCK
NON SW 5V
TO LUMINANCE & CHROMINANCE SECTION PP7403 (Page: 4−10/F−18)
PS703
GND
VIDEO
REG. 12.3V
SYNC Ⓛ
TO LUMINANCE & CHROMINANCE SECTION PP7404 (Page: 4−10/F−18)
PS704
AUDIO DEF (S)
P.B. Ⓗ
GND
SIF
⚠ FS TUNER ENV57884H6
VIDEO
A.DEF (S)
SYNC Ⓛ
30V
5V
CLOCK
DATA
CS
AFC (S)
IF
BM
AGC
BU
TV/VTR
ANT +B
CONV. IN
IN OUT RF
TO RF CONVETER
C790 0.01
R7676 1500 (1W)
R774 5600
C7653 3300P
R773 4700
Q771 MSD601 (AMP)
R772 270
L701 68μ
C708 16V10
C702 16V10
C701 25V4.7
C7685 50V1
C7668 0.01
D7672 MA3150H
D7673 MA3150H
L711 0.22μ
X717 EFCA40R40M1 (40.4MHz TRAP)
R747 470
R792 12 (1/4W)
VR701 2KB U.AGC
VR702 2KB V.AGC
R721 2700
R722 3300
QR711 MRN1403 (UHF:ON)
QR712 MRN1403 (VHF:ON)
QR702 MRN1404 (INV.)
QR701 MRN1404
(A.DEF(S) Ⓗ:ON)
X716 EFCA40R40M1 (40.4MHz TRAP)
R7656 220
C7651 16V10
C703 50V2.2
Q703 MSD601 (AMP)
R727 470
R746 180 (1/4W)
C748 16V47
C725 0.1
R728 470 (1/4W)
D710 MA3100L
C728 0.01
Q712 2SD1992 (9V REG.)
C730 16V10
R759 10K
R723 18K
R724 100 (1/4W)
R726 4700
C723 18P
L715 68μ
R782 820
C782 6P
R725 1800
C781 22P
L781 68μ
R781 270
VR741 10KB
R720 6800
FREQ. RESPONCE
R719 6800
C722 0.01
TP709
C721 50V0.27
R718 750K
R717 3300
C720 0.01
R716 1500
C717 0.01
C710 0.01
X710 EFCH38MGP1
C731 16V10
L714 1.2μ
C718 0.01
C719 0.01
L717 68μ
L718 68μ
R737 270K
TP706
IC701 M51366SP
BNC
EQ
LOCK DET
VIDEO DET
RF AGC
IF AGC
AFT
APC DET
−45°
+45°
VCO
1ST IF AMP
2ND IF AMP
SIF DET
FM DET
LIM
LIM
LIM
TP707
L719 12μ
C727 8P
(5.5MHz TRAP)
X711 EFCS5R5 MW5
R744 820
R745 330
R750 1800
R741 5600
C745 68P
T704 EIV5EC 006A1
TP703
C746 15P
C744 50V0.47
T703 EIV5EC013 A
VCO ADJ
C743 27P
C742 3P
C741 16V10
C739 50V1
C734 0.01
R738 330K
43.5
12.1
0.3
2.4
12.1
0.4
3.8
5.0
4.9
3.6
12.1
4.2
0.1
0
7.8
8.2
8.8
11.1
2.8
0
6.3
0
6.3
0
3.9
4.5
6.2
12.1
9.8
9.1
7.5
4.3
5.4
3.2
9.0
6.3
6.1
2.4
2.4
4.8
9.0
0
0.4
7.8
3.6
0.2
0
3.7
3.7
4.8
8.0
8.0
9.1
4.0
4.5
4.2
6.2
8.8

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SC
ORDERING. WHEN YOU ORDER A PART, PLEASE REF

ATH


IC701 M51366SP
BNC
EQ
LOCK DET
VIDEO DET
RF AGC
AFT
IF AGC
APC DET
-45°
+45°
VCO
1ST IF AMP
2ND IF AMP
SIF DET
FM DET
LIM
LIM
LIM
TP707
L719 12μ
C727 8P
L716 56μ
X711 EFCS5R5 MW5
(5.5MHz TRAP)
R743 47
R744 820
R745 330
R750 1800
T704 EIV5EC 006A1
AFC DET
R741 5600
C745 68P
C746 15P
TP703
C744 50V0.47
R740 47K
T703 EIV5EC013A
VCO ADJ
C743 27P
C742 3P
TP704
C741 16V10
C740 0.01
C739 50V1
C734 0.01
R738 330K
C707 50V0.1
3.6
0.2
0
3.7
3.7
4.8
8.0
8.0
9.1
4.0
4.5
4.2
6.2
8.8
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16

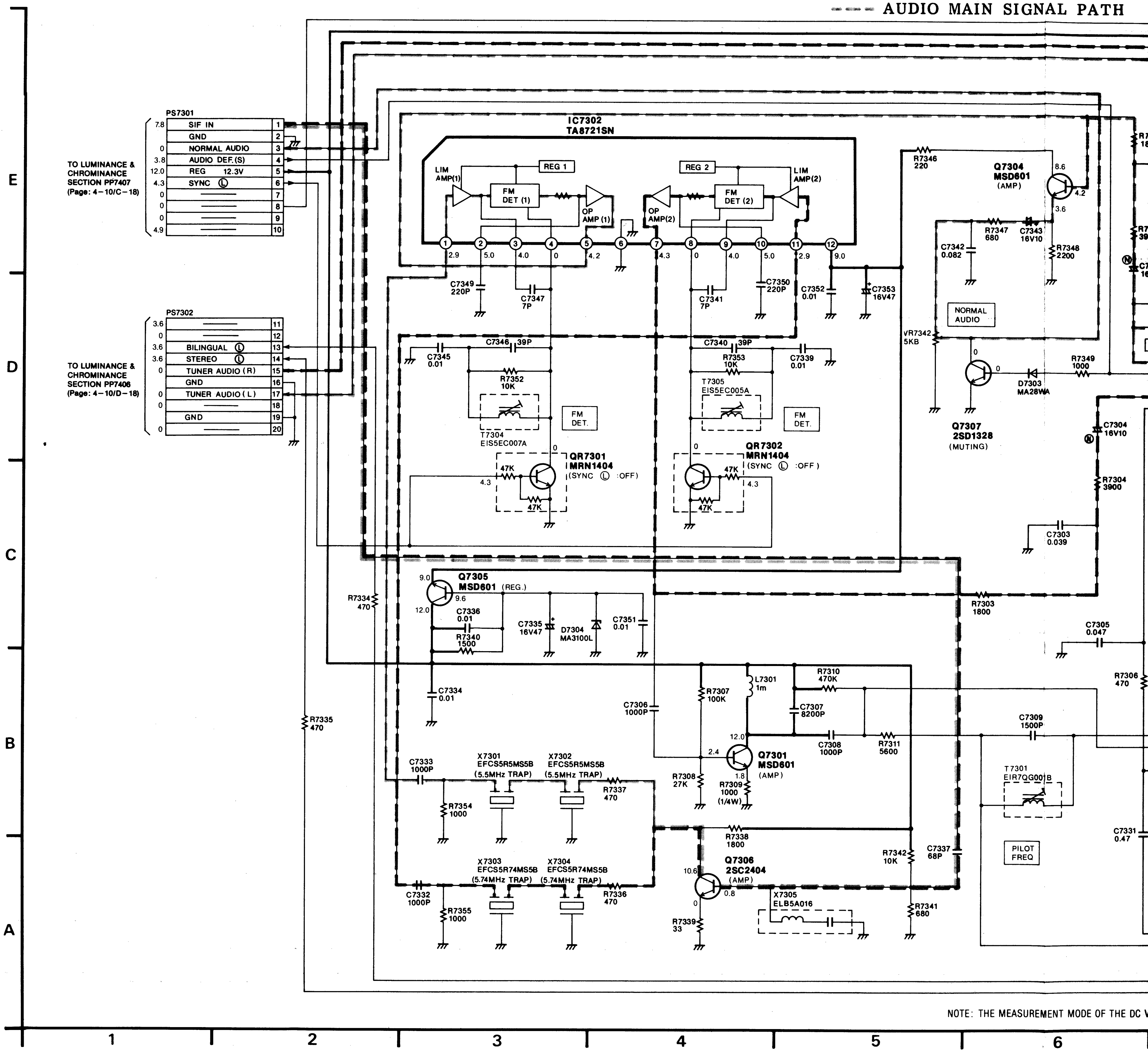
OP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

6 7 8

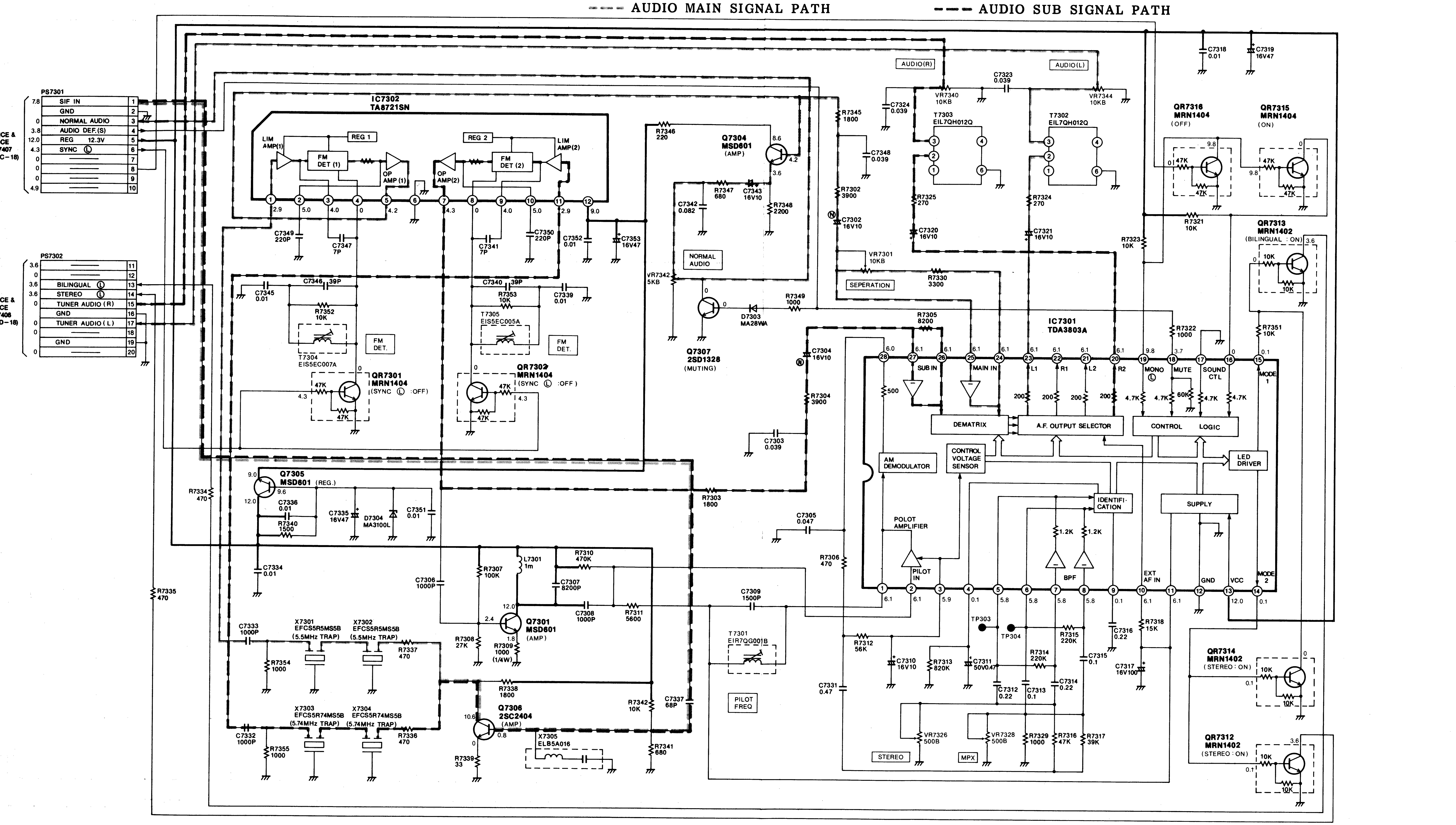
4-13. DECODER PACK SCHEMATIC DIAGRAM

---- AUDIO MAIN SIGNAL PATH


E
D
C
B
A
PS7301
SIF IN
GND
NORMAL AUDIO
AUDIO DEF.(S)
REG 12.3V
SYNC Ⓛ
TO LUMINANCE & CHROMINANCE SECTION PP7407 (Page: 4-10/C-18)
PS7302
BILINGUAL Ⓛ
STEREO Ⓛ
TUNER AUDIO (R)
GND
TUNER AUDIO (L)
GND
TO LUMINANCE & CHROMINANCE SECTION PP7406 (Page: 4-10/D-18)
IC7302 TA8721SN
LIM AMP(1)
REG 1
FM DET (1)
OP AMP (1)
REG 2
FM DET (2)
OP AMP(2)
LIM AMP(2)
C7349 220P
C7347 7P
C7341 7P
C7350 220P
C7352 0.01
C7353 16V47
C7345 0.01
C7346 39P
R7352 10K
T7304 EIS5EC007A
FM DET.
C7340 39P
R7353 10K
C7339 0.01
T7305 EIS5EC005A
FM DET.
QR7301 MRN1404 (SYNC Ⓛ :OFF)
QR7302 MRN1404 (SYNC Ⓛ :OFF)
47K
47K
Q7304 MSD601 (AMP)
R7346 220
R7347 680
C7343 16V10
C7342 0.082
R7348 2200
NORMAL AUDIO
VR7342 5KB
Q7307 2SD1328 (MUTING)
D7303 MA28WA
R7349 1000
C7304 16V10
R7304 3900
C7303 0.039
R7303 1800
C7305 0.047
R7306 470
C7309 1500P
T7301 EIR7QG001B
PILOT FREQ
C7331 0.47
Q7305 MSD601 (REG.)
R7334 470
C7336 0.01
R7340 1500
C7335 16V47
D7304 MA3100L
C7351 0.01
C7334 0.01
R7335 470
C7306 1000P
R7307 100K
L7301 1m
R7310 470K
C7307 8200P
C7308 1000P
R7311 5600
Q7301 MSD601 (AMP)
R7308 27K
R7309 1000 (1/4W)
C7333 1000P
X7301 EFCS5R5MS5B (5.5MHz TRAP)
X7302 EFCS5R5MS5B (5.5MHz TRAP)
R7337 470
R7354 1000
R7338 1800
Q7306 2SC2404 (AMP)
R7342 10K
C7337 68P
X7303 EFCS5R74MS5B (5.74MHz TRAP)
X7304 EFCS5R74MS5B (5.74MHz TRAP)
R7336 470
C7332 1000P
R7355 1000
X7305 ELB5A016
R7339 33
R7341 680
1 2 3 4 5 6

NOTE: THE MEASUREMENT MODE OF THE DC V

DDER PACK SCHEMATIC DIAGRAM



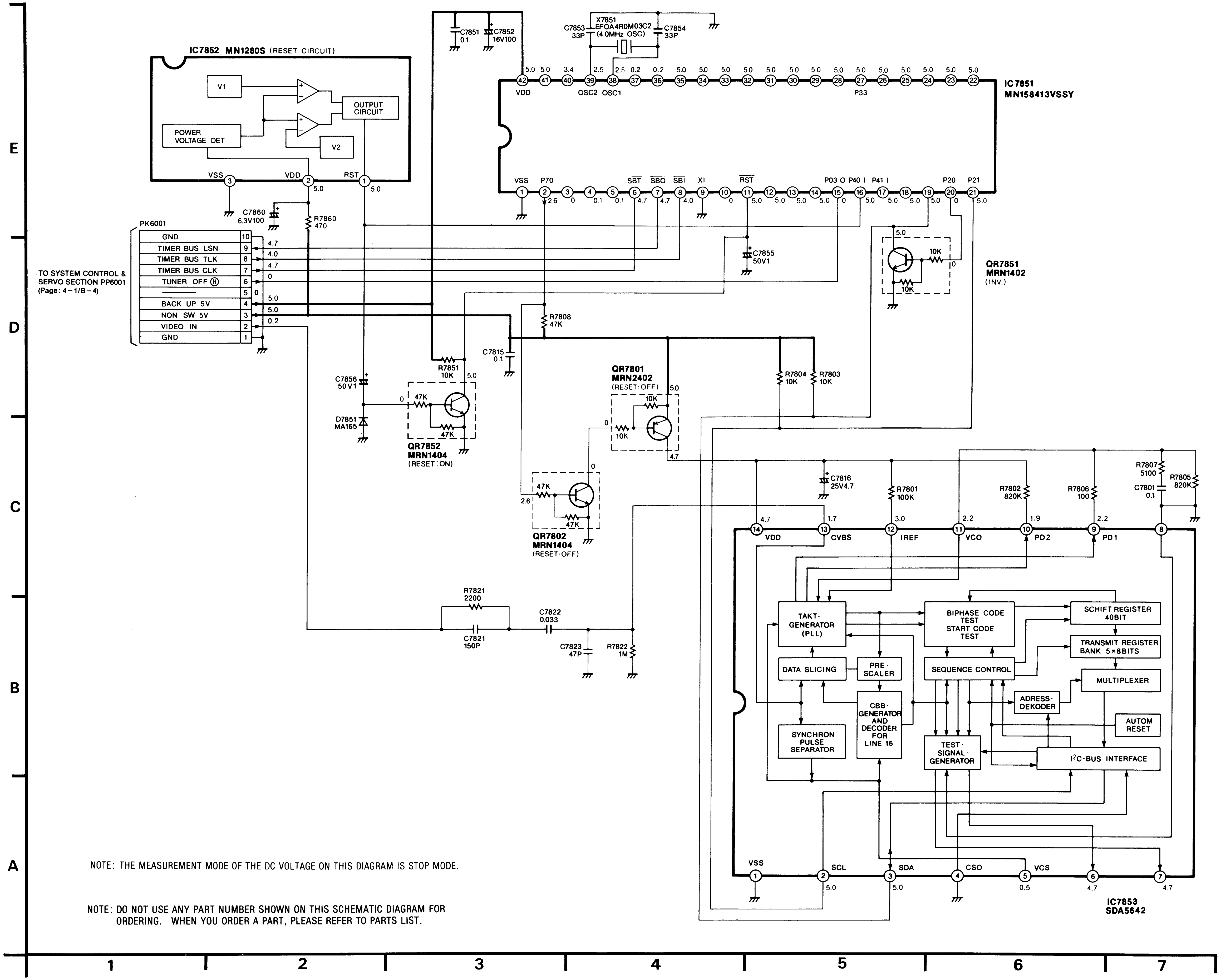
AUDIO MAIN SIGNAL PATH
AUDIO SUB SIGNAL PATH
PS7301
SIF IN
GND
NORMAL AUDIO
AUDIO DEF.(S)
REG 12.3V
SYNC Ⓛ
PS7302
BILINGUAL Ⓛ
STEREO Ⓛ
TUNER AUDIO (R)
GND
TUNER AUDIO (L)
GND
IC7302
TA8721SN
LIM AMP(1)
FM DET (1)
REG 1
OP AMP (1)
OP AMP(2)
REG 2
FM DET (2)
LIM AMP(2)
FM DET.
T7304
EIS5EC007A
T7305
EIS5EC005A
QR7301
MRN1404
(SYNC Ⓛ :OFF)
QR7302
MRN1404
(SYNC Ⓛ :OFF)
Q7304
MSD601
(AMP)
NORMAL AUDIO
Q7307
2SD1328
(MUTING)
D7303
MA28WA
Q7305
MSD601 (REG.)
D7304
MA3100L
Q7301
MSD601
(AMP)
L7301
1m
X7301
EFCS5R5MS5B
(5.5MHz TRAP)
X7302
EFCS5R5MS5B
(5.5MHz TRAP)
X7303
EFCS5R74MS5B
(5.74MHz TRAP)
X7304
EFCS5R74MS5B
(5.74MHz TRAP)
Q7306
2SC2404
(AMP)
X7305
ELB5A016
AUDIO(R)
AUDIO(L)
VR7340 10KB
VR7344 10KB
T7303
EIL7QH012Q
T7302
EIL7QH012Q
VR7301 10KB
SEPERATION
IC7301
TDA3803A
SUB IN
MAIN IN
L1
R1
L2
R2
MONO Ⓛ
MUTE
SOUND CTL
MODE 1
DEMATRIX
A.F. OUTPUT SELECTOR
CONTROL LOGIC
AM DEMODULATOR
CONTROL VOLTAGE SENSOR
LED DRIVER
IDENTIFI-CATION
SUPPLY
POLOT AMPLIFIER
PILOT IN
BPF
EXT AF IN
GND
VCC
MODE 2
T7301
EIR7QG001B
PILOT FREQ
TP303
TP304
VR7326 500B
STEREO
VR7328 500B
MPX
QR7316
MRN1404
(OFF)
QR7315
MRN1404
(ON)
QR7313
MRN1402
(BILINGUAL : ON)
QR7314
MRN1402
(STEREO : ON)
QR7312
MRN1402
(STEREO : ON)

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

2 3 4 5 6 7 8 9 10

4-14. VPS PACK SCHEMATIC DIAGRAM



IC7852 MN1280S (RESET CIRCUIT)
V1
V2
POWER VOLTAGE DET
OUTPUT CIRCUIT
VSS
VDD
RST
C7860 6.3V100
R7860 470
PK6001
GND
TIMER BUS LSN
TIMER BUS TLK
TIMER BUS CLK
TUNER OFF Ⓗ
BACK UP 5V
NON SW 5V
VIDEO IN
GND
TO SYSTEM CONTROL & SERVO SECTION PP6001 (Page: 4－1/B－4)
C7851 0.1
C7852 16V100
X7851 EFOA4R0M03C2 (4.0MHz OSC)
C7853 33P
C7854 33P
IC7851 MN158413VSSY
VDD
OSC2 OSC1
P33
VSS P70
SBT SBO SBI XI RST
P03 O P40 I P41 I
P20 P21
C7855 50V1
QR7851 MRN1402 (INV.)
R7808 47K
C7815 0.1
R7851 10K
C7856 50V1
D7851 MA165
QR7852 MRN1404 (RESET:ON)
QR7801 MRN2402 (RESET:OFF)
QR7802 MRN1404 (RESET:OFF)
R7804 10K
R7803 10K
C7816 25V4.7
R7801 100K
R7802 820K
R7806 100
R7807 5100
C7801 0.1
R7805 820K
R7821 2200
C7821 150P
C7822 0.033
C7823 47P
R7822 1M
VDD CVBS IREF VCO PD2 PD1
TAKT-GENERATOR (PLL)
BIPHASE CODE TEST START CODE TEST
SCHIFT REGISTER 40BIT
TRANSMIT REGISTER BANK 5×8BITS
DATA SLICING
PRE-SCALER
SEQUENCE CONTROL
MULTIPLEXER
ADRESS-DEKODER
AUTOM RESET
SYNCHRON PULSE SEPARATOR
CBB-GENERATOR AND DECODER FOR LINE 16
TEST-SIGNAL-GENERATOR
I²C-BUS INTERFACE
VSS SCL SDA CSO VCS
IC7853 SDA5642
A B C D E
1 2 3 4 5 6 7

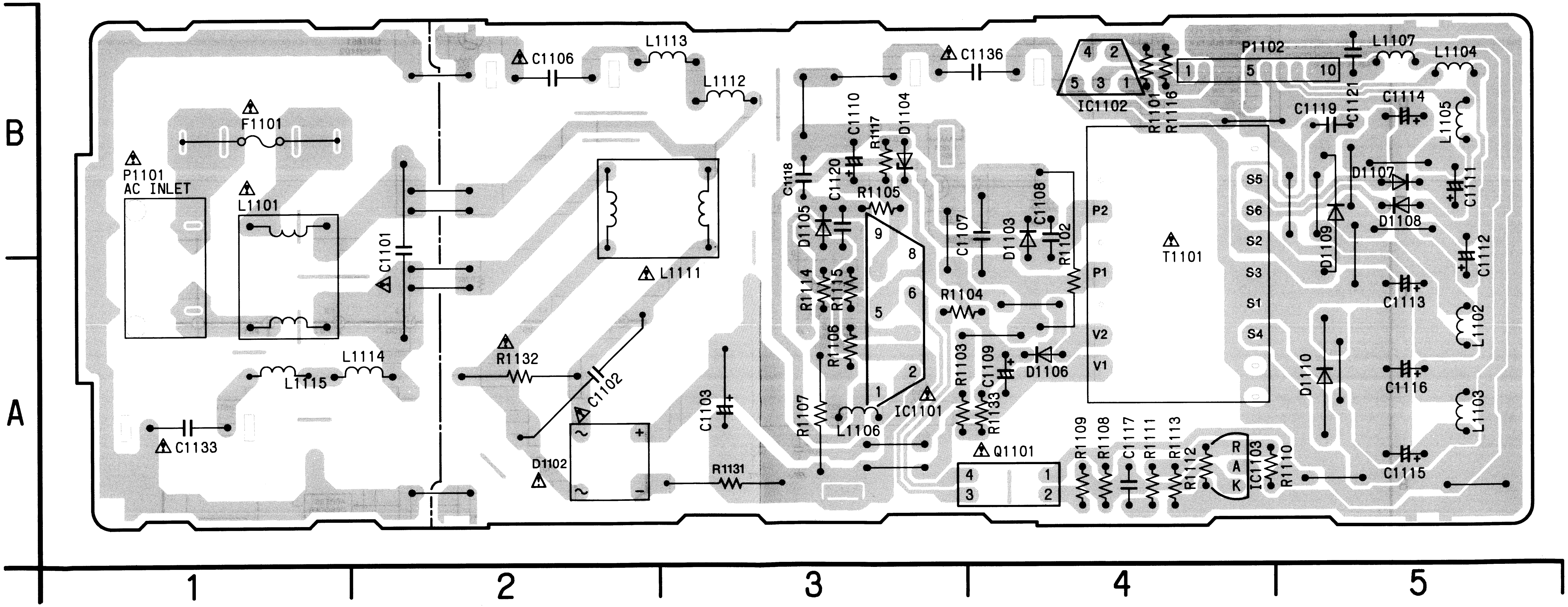
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

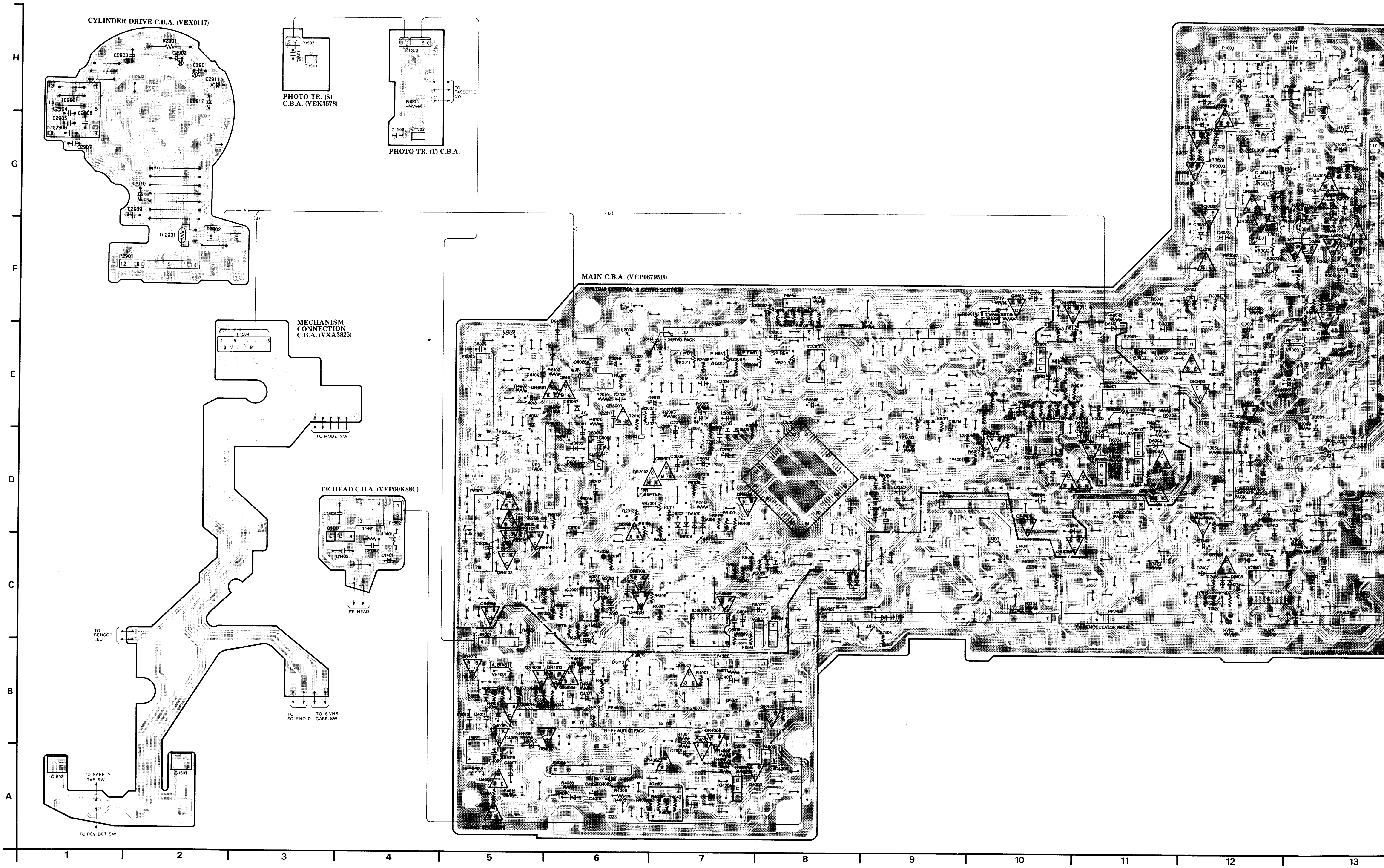
4-15. POWER C.B.A. (VEP01487A)

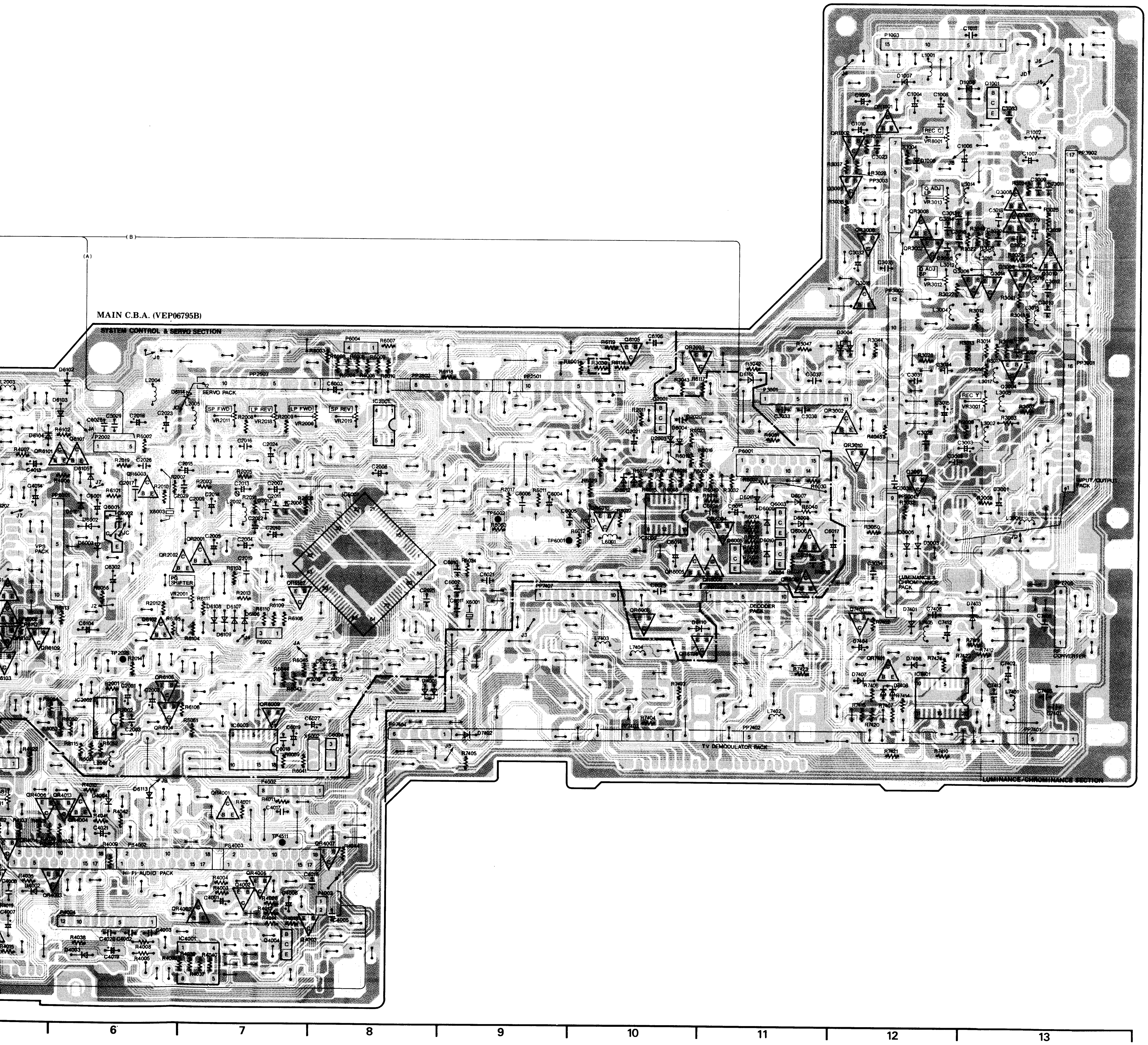
POWER C.B.A.	
Transistor	
Q1101	A-4
Integrated Circuit	
IC1101	A-3
IC1102	B-4
IC1103	A-4
Connector	
P1101	B-1
P1102	B-4

ADDRESS INFORMATION


B
A
F1101
P1101
AC INLET
L1101
C1101
L1114
L1115
C1133
C1106
L1113
L1112
L1111
R1132
C1102
D1102
R1131
C1103
C1136
C1118
C1120
C1110
R1117
D1104
R1105
D1105
R1114
R1115
R1106
R1107
L1106
9
8
6
5
2
1
IC1101
C1107
D1103
C1108
R1102
R1104
R1103
C1109
R1133
D1106
Q1101
4
1
3
2
4
2
5
3
1
IC1102
R1101
R1116
P1102
1
5
10
T1101
P2
P1
V2
V1
S5
S6
S2
S3
S1
S4
C1119
C1121
L1107
L1104
C1114
L1105
D1107
D1108
C1111
D1109
C1112
C1113
L1102
D1110
C1116
L1103
C1115
R1109
R1108
C1117
R1111
R1113
R1112
R
A
K
IC1103
R1110
1
2
3
4
5

4-16. MAIN C.B.A. (VEP06795B)


CYLINDER DRIVE C.B.A. (VEX0117)
PHOTO TR. (S) C.B.A. (VEK3578)
PHOTO TR. (T) C.B.A.
TO CASSETTE SW
MECHANISM CONNECTION C.B.A. (VXA3825)
TO MODE SW
FE HEAD C.B.A. (VEP00K88C)
FE HEAD
TO SENSOR LED
TO SOLENOID
TO S-VHS CASS. SW
TO SAFETY TAB SW
TO REV DET. SW
MAIN C.B.A. (VEP06795B)
SYSTEM CONTROL & SERVO SECTION
SERVO PACK
VPS PACK
HI-FI AUDIO PACK
AUDIO SECTION
DECODER PACK
TV DEMODULATOR PACK
LUMINANCE & CHROMINANCE PACK
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13


(B)
(A)
MAIN C.B.A. (VEP06795B)
SYSTEM CONTROL & SERVO SECTION
SERVO PACK
SP FWD
LP REV
LP FWD
SP REV
VPS PACK
FG SHIFTER
DECODER PACK
LUMINANCE & CHROMINANCE PACK
TV DEMODULATOR PACK
HI-FI AUDIO PACK
REC C
REC Y
Q ADJ
INPUT /OUTPUT PACK
CONVERTER
LUMINANCE/CHROMINANCE SECTION
6
7
8
9
10
11
12
13

MAIN C.B.A. ADDRESS INFORMATION

SYSTEM CONTROL & SERVO Section	
Transistor	
Q1401	D-3
Q1501	H-3
Q1502	G-4
Q2001	E-10
Q6001	D-6
Q6003	D-11
Q6004	D-11
Q6005	D-11
Q6006	D-11
Q6101	E-6
Q6102	C-6
Transistor & Resistor	
QR2001	D-7
QR2002	D-6
QR6001	D-5
QR6002	D-5
QR6003	E-6
QR6004	D-11
QR6005	D-10
QR6006	D-11
QR6007	D-11
QR6008	D-10
QR6009	C-7
QR6010	D-10
QR6101	E-6
QR6102	C-5
QR6103	C-5
QR6104	C-6
QR6105	F-10
QR6106	C-11
QR6107	C-7
QR6108	C-6
QR6109	C-5
Integrated Circuit	
IC1501	A-2
IC1502	A-1
IC2001	E-8
IC2002	C-6
IC2901	H-1
IC6001	E-8
IC6002	D-10
IC6003	C-7
IC6004	C-8
Test Point	
TP2026	C-6
TP6001	D-9
TP6002	D-9
Adjustment	
VR2001	D-7
VR2006	E-7
VR2011	E-7
VR2018	E-7
VR2019	E-8
Connector	
P1502	D-4
P1504	E-3
P1507	H-3
P1508	H-4
P2002	E-6
P2901	F-2
P2902	F-2
P6001	E-11
P6004	F-8
P6005	E-5
P6006	D-5
P6902	C-7
PP2501	E-9
PP2502	E-8
PP2503	E-7
PP6001	E-6

ADDRESS INFORMATION

LUMINANCE & CHROMINANCE Section	
Transistor	
Q1001	H-13
Q3001	E-12
Q3004	E-13
Q3005	G-12
Q3006	F-13
Q3007	G-13
Q3008	G-13
Q3009	F-13
Q3010	F-13
Q3014	F-13
Q3015	F-12
Q7401	D-12
Transistor & Resistor	
QR1001	H-12
QR1002	G-12
QR3002	E-12
QR3003	F-10
QR3005	G-12
QR3006	G-12
QR3007	F-12
QR3008	G-13
QR3010	E-12
QR7401	C-12
Integrated Circuit	
IC7401	C-12
Adjustment	
VR3001	E-13
VR3012	F-12
VR3013	G-12
VR8001	G-12
Connector	
P1003	H-12
P3001	E-11
PP3001	E-12
PP3002	F-12
PP3003	G-12
PP3901	E-13
PP3902	G-13
PP7401	C-13
PP7402	C-11
PP7403	C-10
PP7404	C-8
PP7705	D-13
PP7406	D-11
PP7407	D-9

ADDRESS INFORMATION

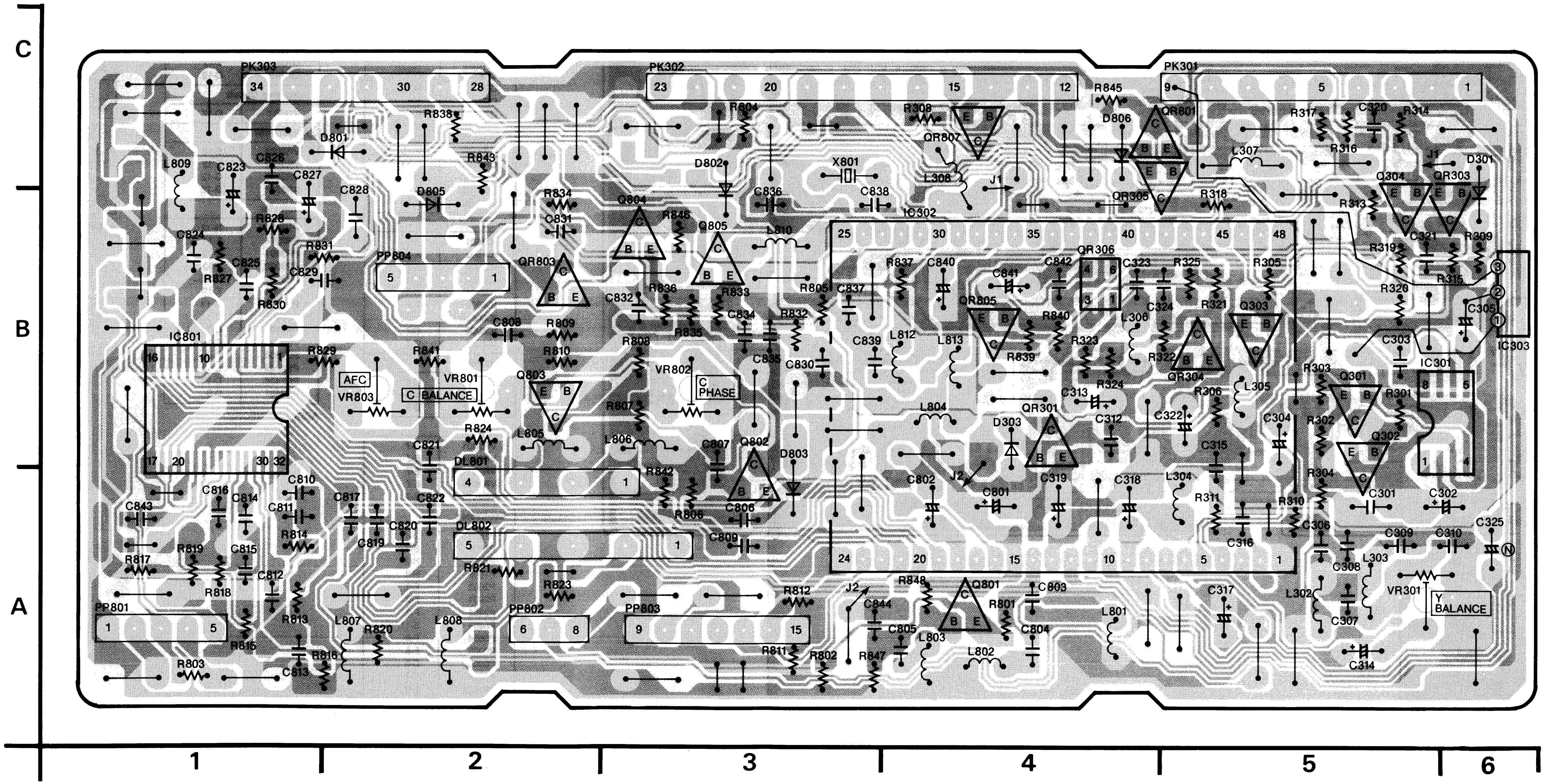
AUDIO Section	
Transistor	
Q4002	A-7
Q4003	A-8
Q4005	A-5
Q4006	B-5
Transistor & Resistor	
QR4001	B-7
QR4002	A-7
QR4003	B-6
QR4004	B-6
QR4005	B-7
QR4006	B-5
QR4007	B-8
QR4010	A-5
QR4012	B-5
QR4013	B-6
QR4014	B-5
Integrated Circuit	
IC4001	A-7
Test Point	
TP4511	B-7
Adjustment	
VR4001	B-5
Connector	
P4001	B-5
P4002	B-7
P4003	A-8
P4004	A-6
PS4001	B-6
PS4002	B-6
PS4003	B-7

ADDRESS INFORMATION

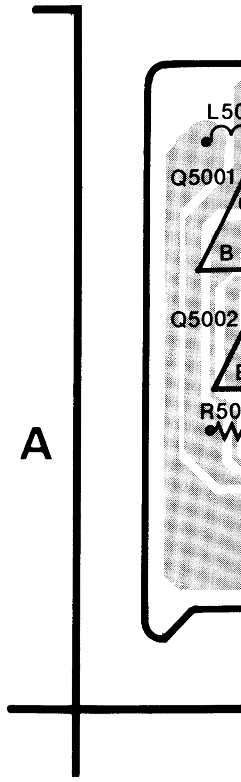
4-17. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03928A)

LUMINANCE & CHROMINANCE PACK C.B.A.			
Transistor		**Integrated Circuit**	
Q301	B-5	IC301	B-6
Q302	B-5	IC302	A-4
Q303	B-5	IC801	B-1
Q801	A-4	**Adjustment**	
Q802	A-3	VR301	A-6
Q803	B-2	VR801	B-2
Q804	B-3	VR802	B-3
Q805	B-3	VR803	B-2
Transistor & Resistor		**Connector**	
QR301	B-4	PK301	C-5
QR303	B-6	PK302	C-3
QR304	B-5	PK303	C-2
QR305	C-5	PP801	A-1
QR306	B-4	PP802	A-2
QR801	C-5	PP803	A-3
QR803	B-2	PP804	B-2
QR805	B-4		
QR807	C-4		

ADDRESS INFORMATION


C
B
A
1
2
3
4
5
6
PK303
34
30
28
PK302
23
20
15
12
PK301
9
5
1
R845
D806
QR801
R308
QR807
R804
D801
R838
R843
L809
C823
C826
C827
C828
D805
R834
C831
Q804
R846
Q805
D802
C836
X801
C838
IC302
L810
R317
C320
R314
L307
R316
J1
D301
Q304
QR303
R313
QR305
R318
R826
C824
R827
C825
R831
C829
R830
PP804
QR803
C832
R836
R833
C834
R805
R832
C837
R837
C840
C841
C842
QR306
C323
R325
R305
R319
C321
R309
R315
R320
C305
IC303
IC801
10
16
R829
C808
R809
R810
R835
R808
C835
C830
C839
L812
L813
QR805
R840
R839
R323
L306
C324
R321
Q303
C303
IC301
AFC
VR803
C BALANCE
R841
VR801
Q803
VR802
C PHASE
R807
L804
C313
R324
QR301
D303
C312
QR304
R322
R306
L305
C322
R303
Q301
R301
Q302
R302
C304
R824
C821
L805
L806
C807
Q802
D803
DL801
4
1
17
20
30
32
R842
C806
R806
C802
J2
C801
C319
C318
L304
R311
R310
C315
R304
C301
C302
C306
C843
C816
C814
C810
C811
C817
C822
R814
C820
C819
DL802
C809
C316
C309
C310
C325
N
R817
R819
C815
R818
C812
R821
R823
R812
R848
Q801
C803
R801
C844
C805
C804
C317
L303
C308
VR301
Y BALANCE
L302
C307
PP801
R813
R815
R816
C813
R803
L807
R820
L808
PP802
6
8
PP803
9
L803
R847
R811
R802
L802
L801
C314
25
35
40
45
48
24
B
E
C

4-18. S-VHS


A
L50
Q5001
B
Q5002
R50

P03928A)

LUMINANCE & CHROMINANCE PACK C.B.A.

Transistor	
Q301	B-5
Q302	B-5
Q303	B-5
Q801	A-4
Q802	A-3
Q803	B-2
Q804	B-3
Q805	B-3

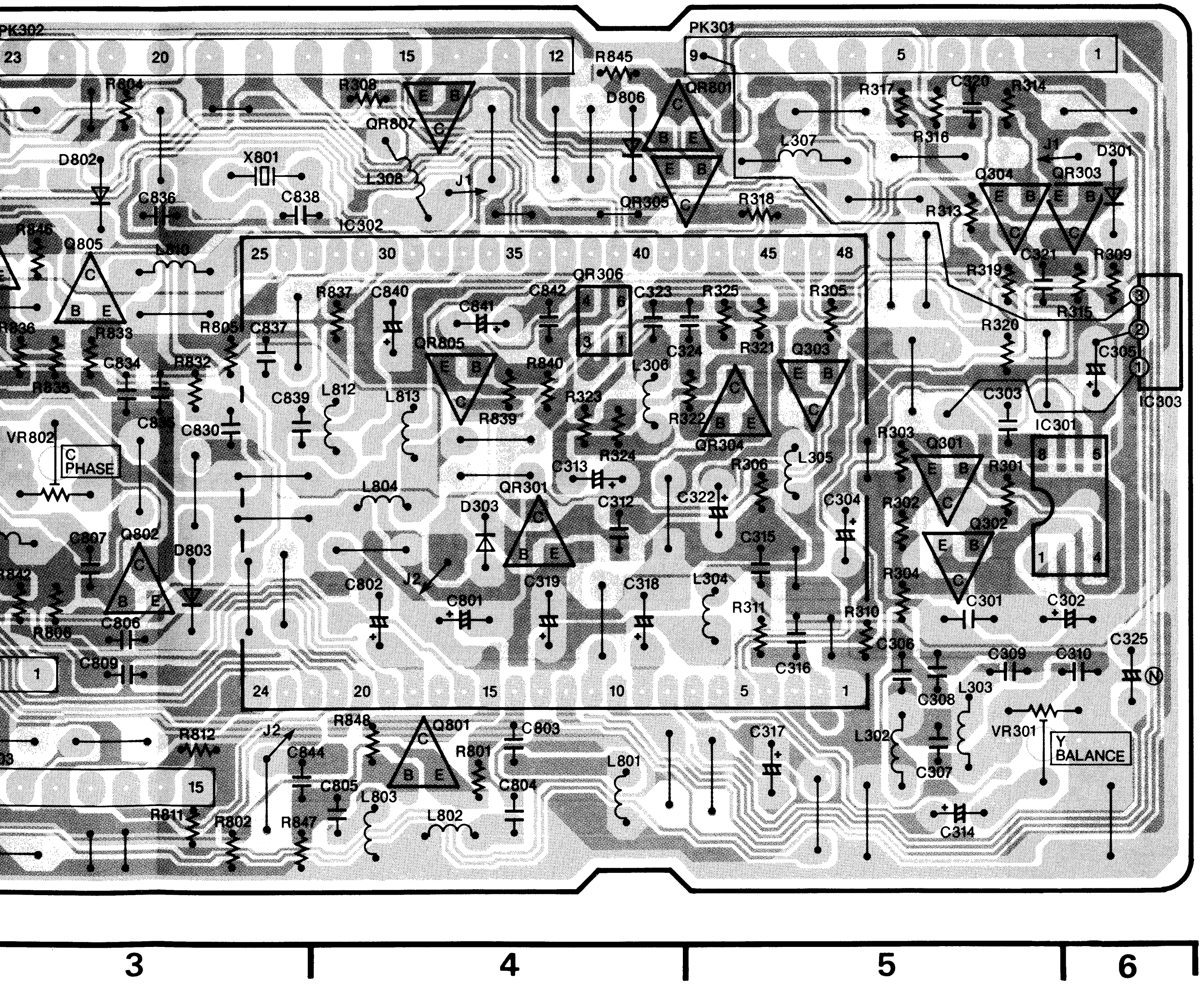
Transistor & Resistor	
QR301	B-4
QR303	B-6
QR304	B-5
QR305	C-5
QR306	B-4
QR801	C-5
QR803	B-2
QR805	B-4
QR807	C-4

Integrated Circuit	
IC301	B-6
IC302	A-4
IC801	B-1

Adjustment	
VR301	A-6
VR801	B-2
VR802	B-3
VR803	B-2

Connector	
PK301	C-5
PK302	C-3
PK303	C-2
PP801	A-1
PP802	A-2
PP803	A-3
PP804	B-2

ADDRESS INFORMATION


PK302
23
20
15
12
R845
PK301
9
5
1
R804
R308
QR807
D806
QR801
R317
C320
R314
R316
D802
X801
L308
J1
L307
D301
C836
C838
IC302
QR305
R318
Q304
QR303
R313
Q805
L810
25
30
35
40
45
48
C321
R309
R837
C840
C841
C842
QR306
C323
R325
R305
R319
R315
R836
R833
R805
C837
QR805
R840
R321
Q303
R320
C305
C834
R832
L306
C324
C839
L812
L813
R839
R323
R322
QR304
C303
IC303
C830
VR802
C PHASE
R324
C313
R306
L305
R303
Q301
IC301
R301
L804
QR301
D303
C312
C322
C304
R302
Q302
C807
Q802
D803
C315
C802
J2
C801
C319
C318
L304
R304
C301
C302
C806
R311
R310
C306
C809
C309
C310
C325
C316
L303
1
24
10
R848
Q801
C803
C308
R812
C844
R801
C317
L302
VR301
Y BALANCE
C805
C804
L801
C307
R811
R802
R847
L803
L802
C314
3
4
5
6

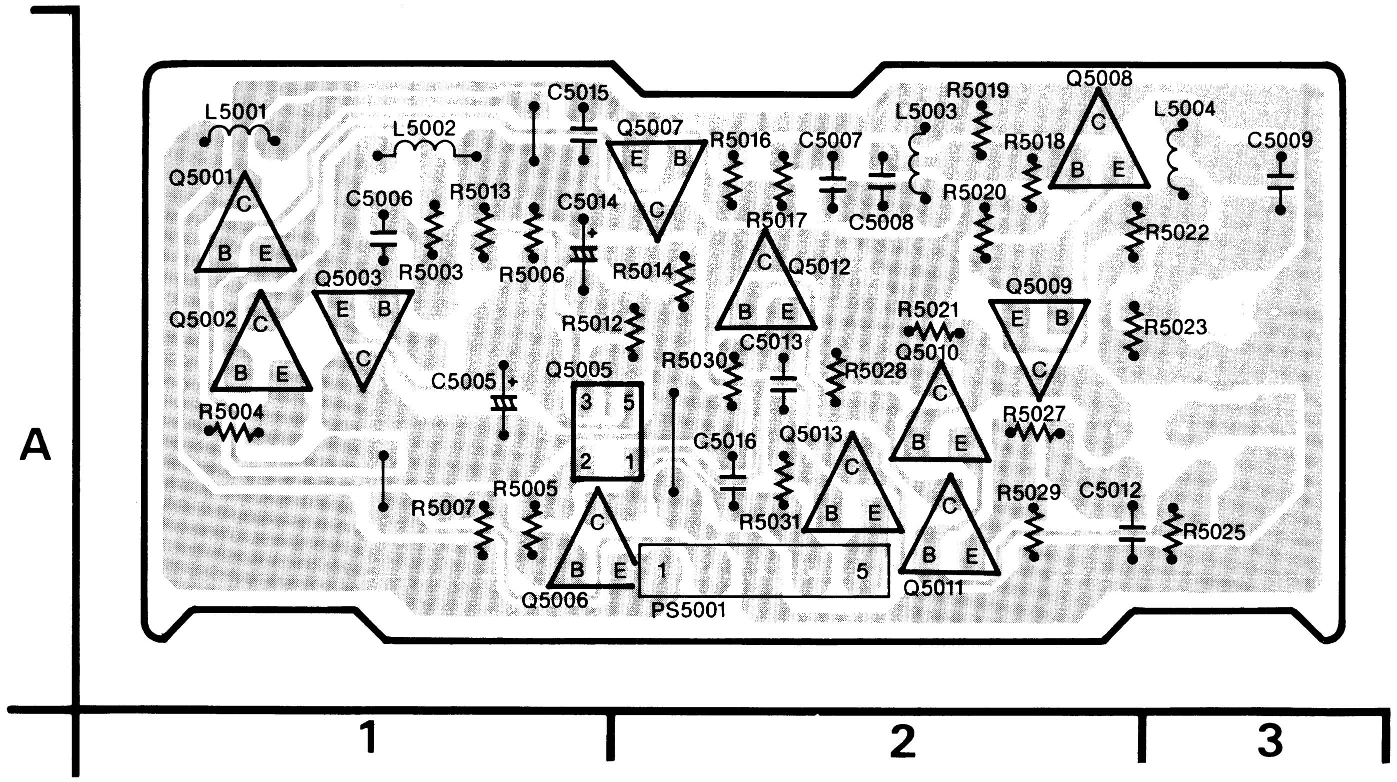
4-18. S-VHS P.B. PACK C.B.A. (VEP03920A)

S-VHS P.B. PACK C.B.A.

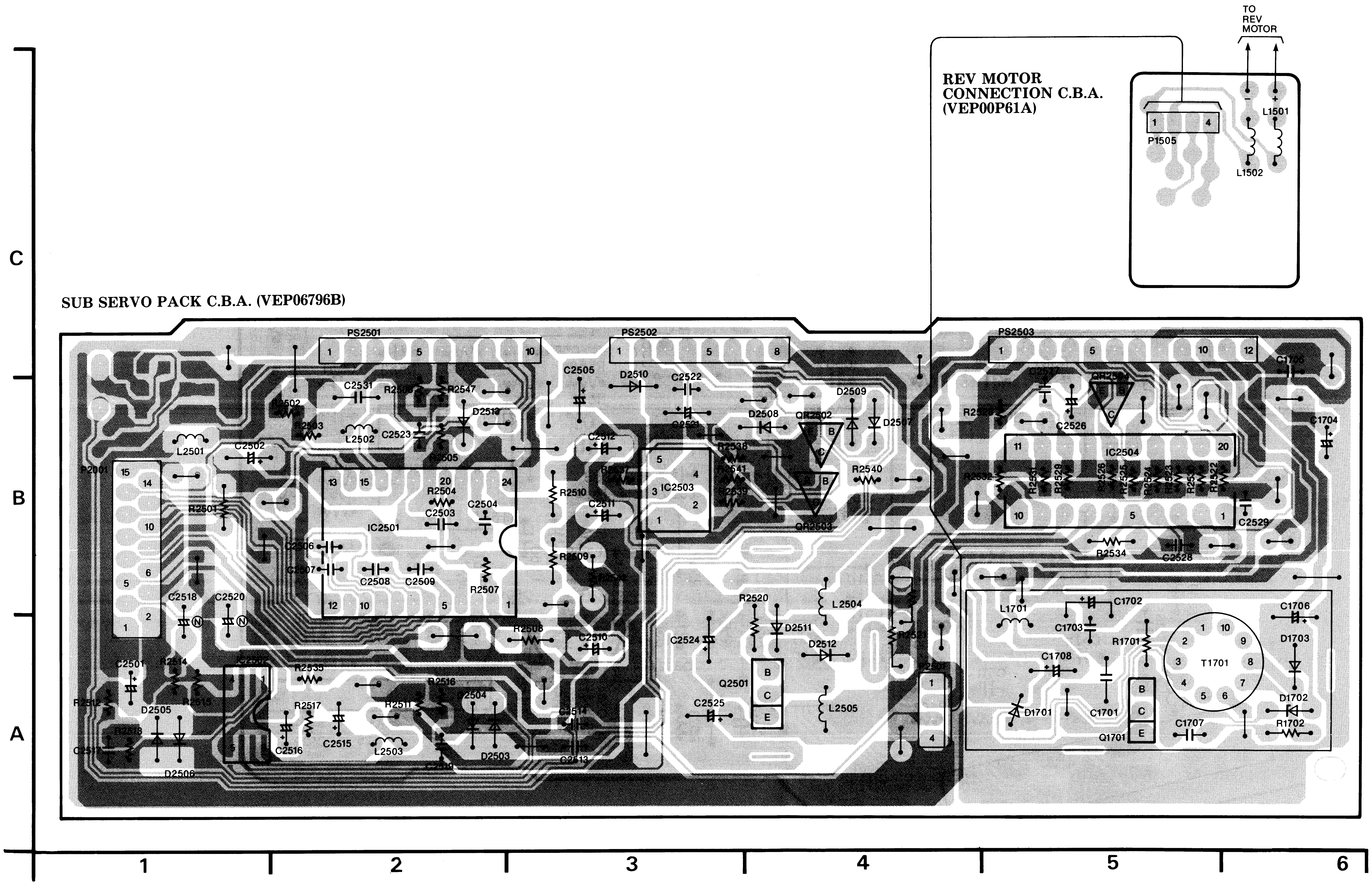
Transistor	
Q5001	A-1
Q5002	A-1
Q5003	A-1
Q5005	A-1
Q5006	A-1
Q5007	B-2
Q5008	B-2
Q5009	A-2
Q5010	A-2
Q5011	A-2
Q5012	A-2
Q5013	A-2

Connector	
PS5001	A-2

ADDRESS INFORMATION


A
L5001
L5002
C5015
Q5007
R5016
C5007
L5003
R5019
Q5008
L5004
C5009
R5018
Q5001
C5006
R5013
C5014
R5017
C5008
R5020
R5022
Q5003
R5003
R5006
R5014
Q5012
Q5009
Q5002
R5012
R5021
R5023
C5013
Q5010
R5030
R5028
C5005
Q5005
R5027
R5004
C5016
Q5013
R5005
R5031
R5029
C5012
R5007
R5025
Q5006
PS5001
Q5011
1
2
3
5
B
C
E

4-19. SUB SERVO PACK C.B.A. (VEP06796B)


TO REV MOTOR
REV MOTOR CONNECTION C.B.A. (VEP00P61A)
P1505
L1501
L1502
SUB SERVO PACK C.B.A. (VEP06796B)
PS2501
PS2502
PS2503
P2001
IC2501
IC2502
IC2503
IC2504
QR2502
QR2503
QR2504
Q2501
Q1701
T1701
L2501
L2502
L2503
L2504
L2505
L1701
R2501
R2504
R2507
R2508
R2509
R2510
R2520
R2534
R2535
R2540
R2547
R1701
R1702
C2501
C2502
C2503
C2504
C2505
C2508
C2509
C2510
C2511
C2512
C2515
C2516
C2518
C2520
C2522
C2523
C2524
C2525
C2526
C2528
C2529
C2531
C1702
C1703
C1704
C1706
C1707
C1708
C1701
D2503
D2505
D2506
D2507
D2508
D2509
D2510
D2511
D2512
D1701
D1702
D1703
A
B
C
1
2
3
4
5
6

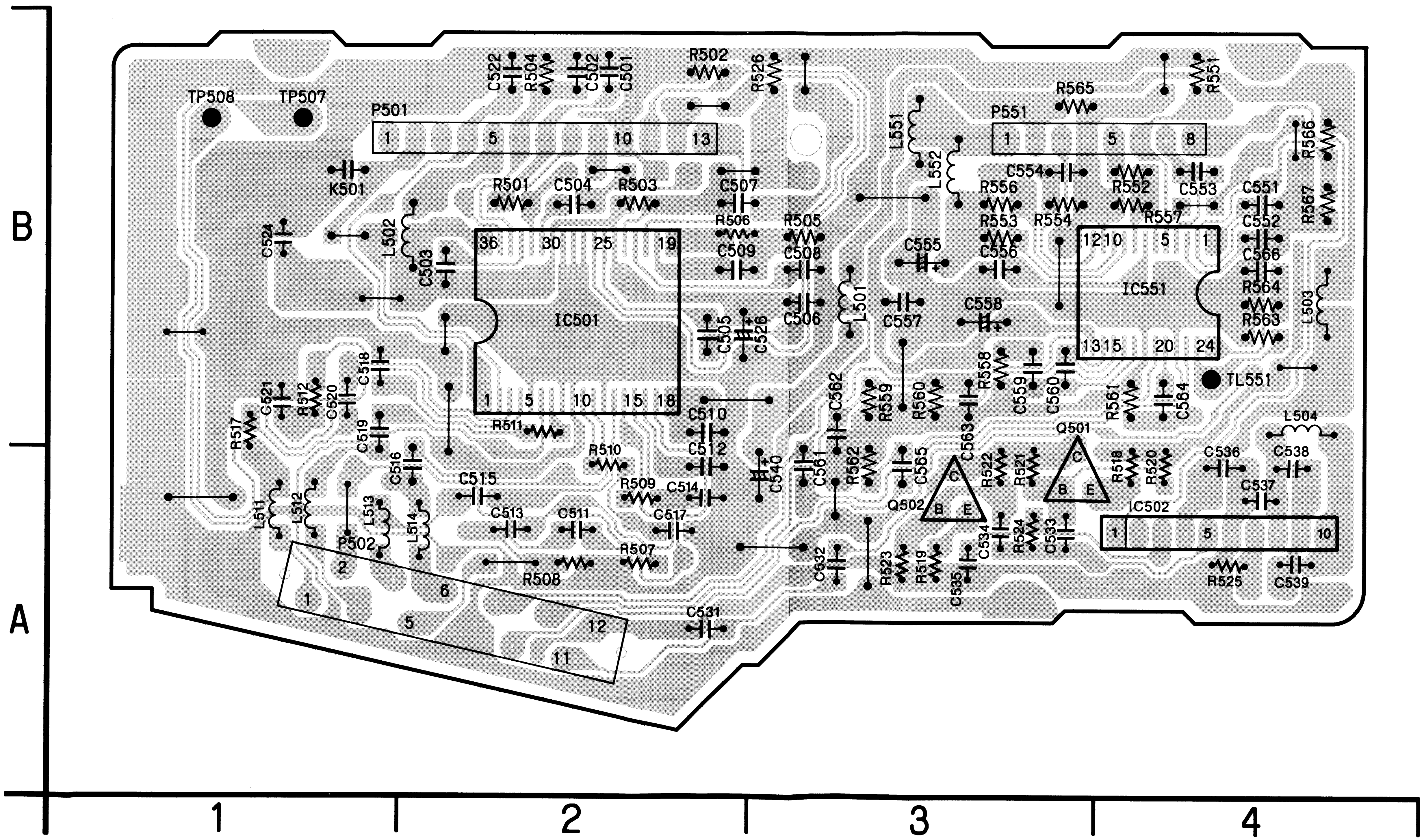
SUB SERVO PACK C.B.A.	
Transistor	
Q1701	A-5
Q2501	A-3
Transistor & Resistor	
QR2502	B-4
QR2503	B-4
QR2504	B-5
Integrated Circuit	
IC2501	B-2
IC2502	A-1
IC2503	B-3
IC2504	B-5
Connector	
P2001	B-1
P2501	A-4
PS2501	B-2
PS2502	B-3
PS2503	B-5

ADDRESS INFORMATION

4-20. HEAD AMP C.B.A. (VEP05178A)

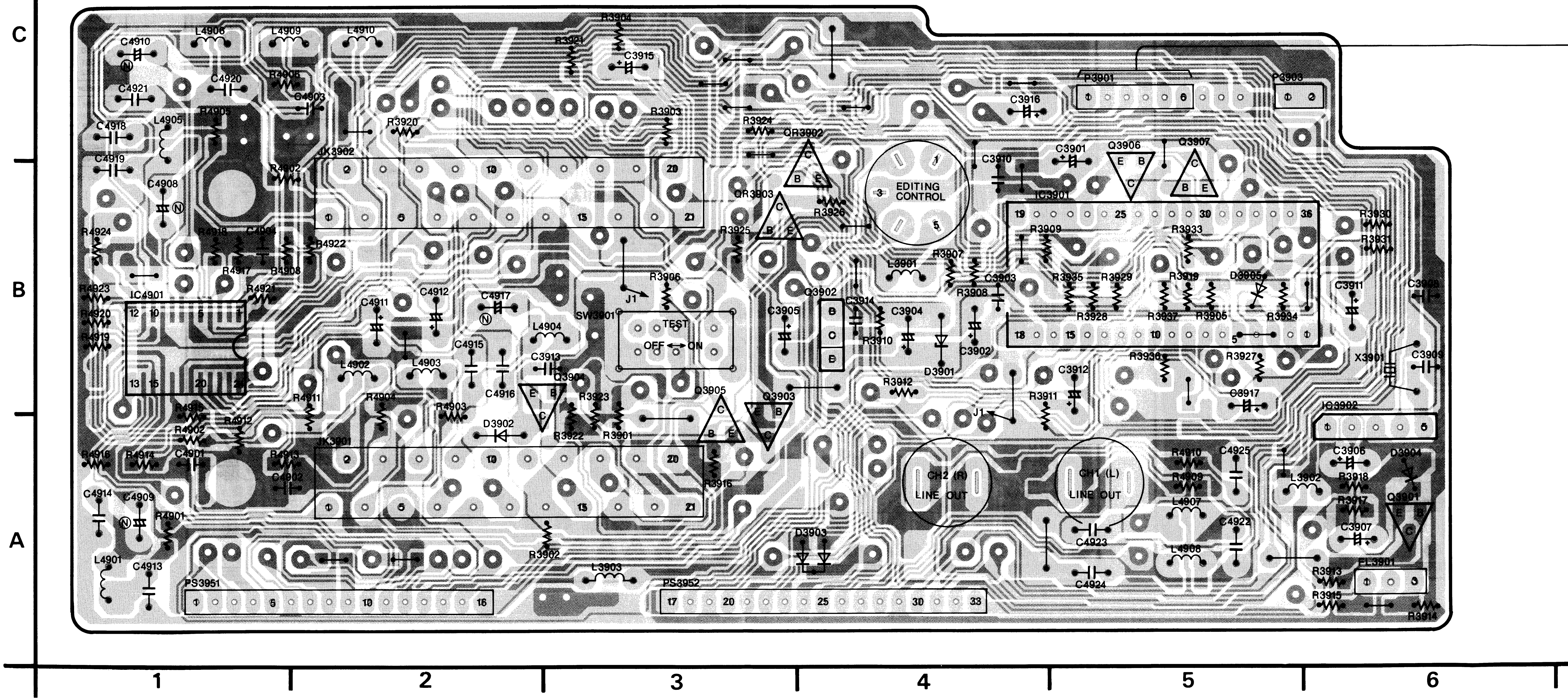
HEAD AMP C.B.A.	
Transistor	
Q501	A-3
Q502	A-3
Integrated Circuit	
IC501	B-2
IC502	A-4
IC551	B-4
Test Point	
TP507	B-1
TP508	B-1
TL551	B-4
Connector	
P501	B-1
P502	A-1
P551	B-3

ADDRESS INFORMATION


B
A
1
2
3
4
TP508
TP507
P501
1
5
10
13
K501
C522
R504
C502
C501
R502
R526
R501
C504
R503
C507
R506
R505
C509
C508
C506
C505
C526
C524
L502
C503
IC501
36
30
25
19
1
5
10
15
18
C518
C521
R512
C520
C519
R517
R511
R510
C510
C512
C516
C515
R509
C514
C517
C513
C511
L511
L512
L513
L514
P502
2
1
6
5
12
11
R508
R507
C531
C540
L551
L552
P551
1
5
8
R565
R551
C554
R552
C553
R556
R554
R553
R557
C555
C556
L501
C557
C558
IC551
12
10
5
1
13
15
20
24
C551
C552
C566
C564
R564
R563
R566
R567
L503
TL551
C562
R559
R560
R558
C559
C560
R561
C564
C561
R562
C565
C563
Q501
Q502
C
B
E
R522
R521
R518
R520
L504
C536
C538
C537
IC502
1
5
10
C534
R524
C533
C532
R523
R519
C535
R525
C539

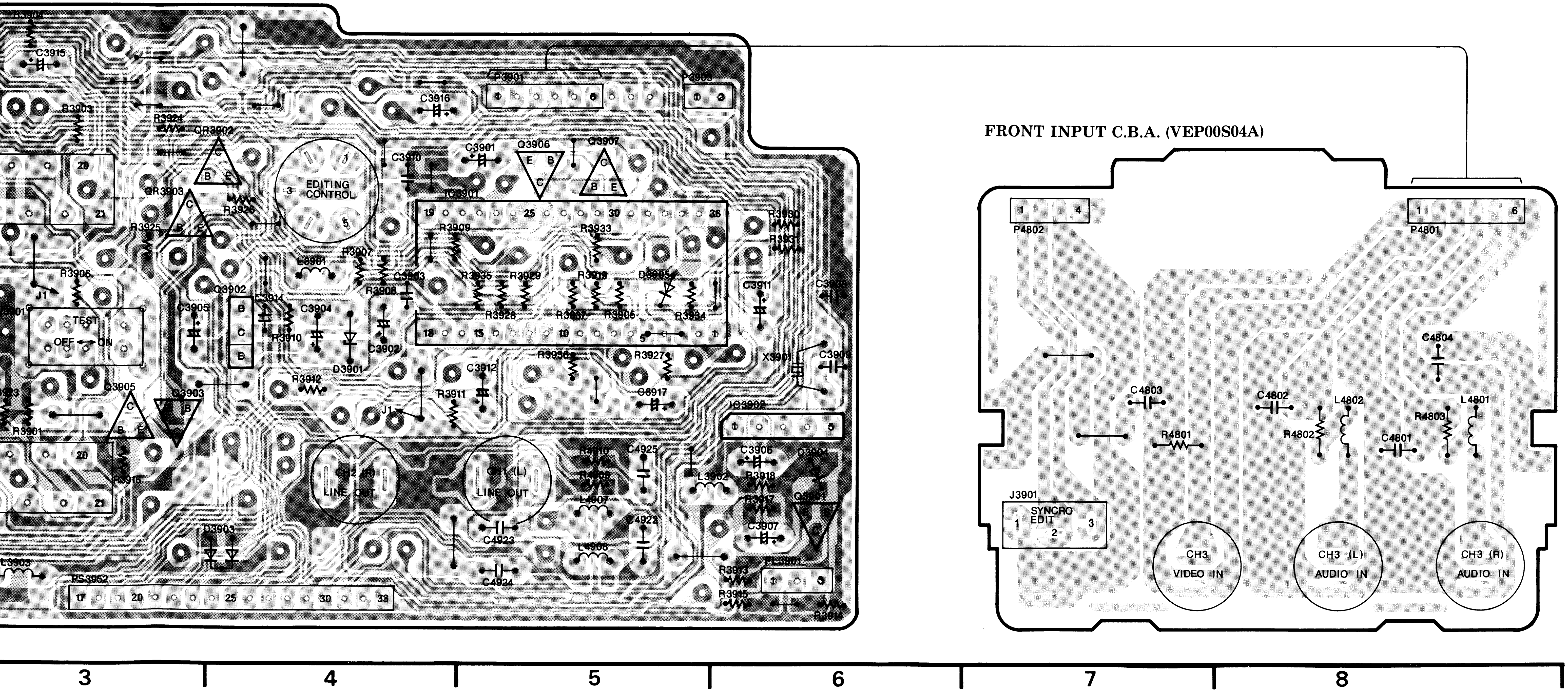
4-21. INPUT/OUTPUT PACK C.B.A. (VEP03912A)

INPUT/OUTPUT PACK C.B.A. (VEP03912A)

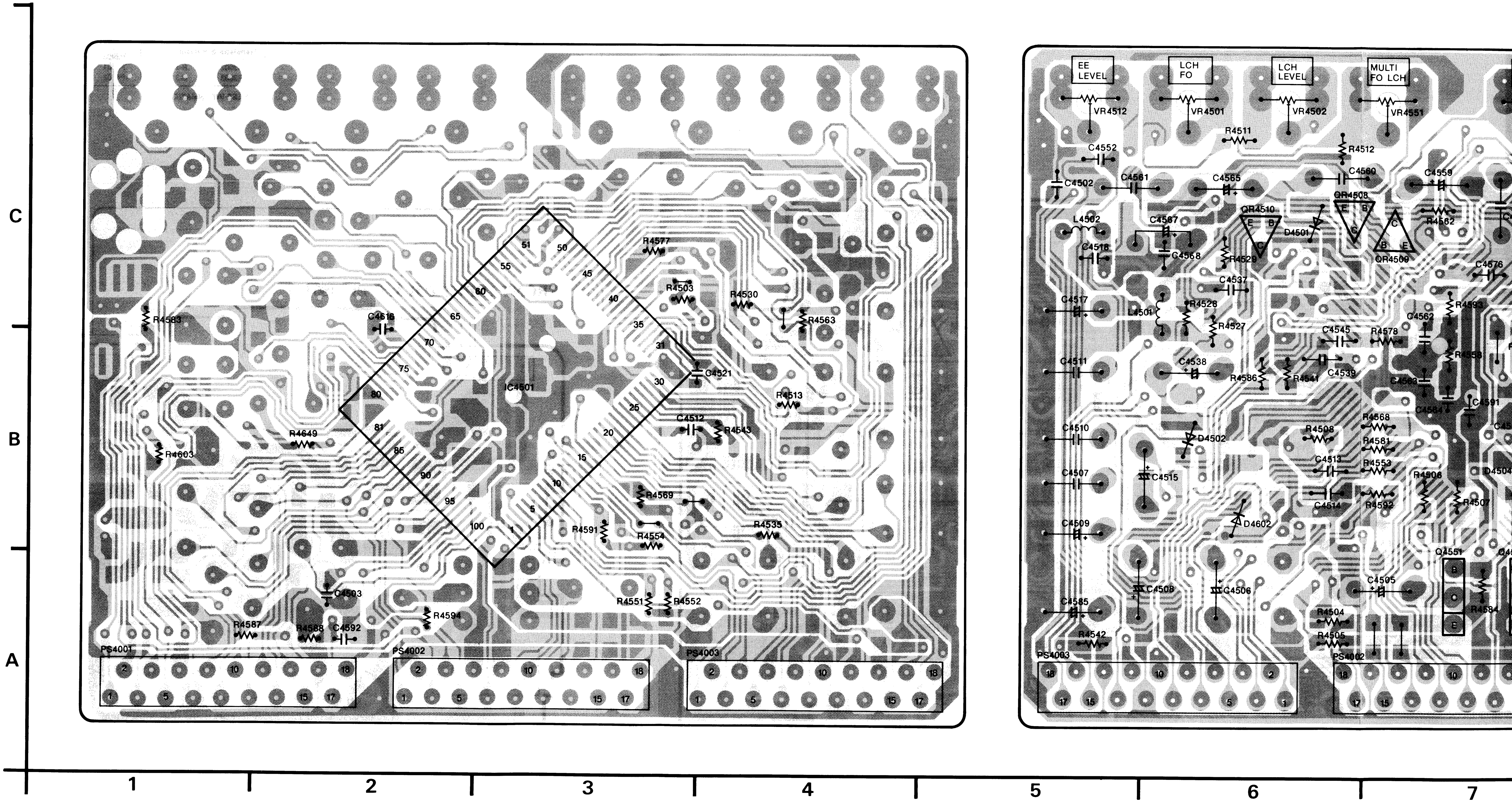

C
B
A
1
2
3
4
5
6
C4910
L4906
L4909
L4910
R3904
R3921
C3915
C4921
C4920
R4906
C4903
R3903
C4918
L4905
R4905
R3920
R3924
QR3902
C3916
P3901
P3903
C4919
C4908
R4902
JK3902
QR3903
EDITING CONTROL
C3910
C3901
Q3906
Q3907
IC3901
R4924
R4918
C4904
R4922
R3925
R3926
R3909
R3933
R3930
R3931
R4917
R4908
L3901
R3907
C3903
R4923
IC4901
R4921
C4911
C4912
C4917
R3906
J1
Q3902
C3914
R3935
R3929
R3919
D3905
C3911
C3908
R4920
R4919
SW3901
TEST
OFF ⟷ ON
C3905
C3904
R3908
R3928
R3937
R3905
R3934
L4904
R3910
C3902
C4915
L4902
L4903
C3913
D3901
R3936
R3927
X3901
C3909
Q3904
C3912
R3911
C3917
R4911
R4904
R4903
C4916
R3923
Q3905
Q3903
R3912
IC3902
R4913
R4912
D3902
R3922
R3901
R4902
R4916
R4914
C4901
R4915
JK3901
C4902
R3916
CH2 (R) LINE OUT
CH1 (L) LINE OUT
R4910
R4909
C4925
C3906
D3904
L3902
R3918
R3917
Q3901
C4914
C4909
R4901
L4907
C4922
C3907
D3903
C4923
L4908
R3902
L4901
C4913
L3903
PS3951
PS3952
C4924
R3913
FL3901
R3915
R3914

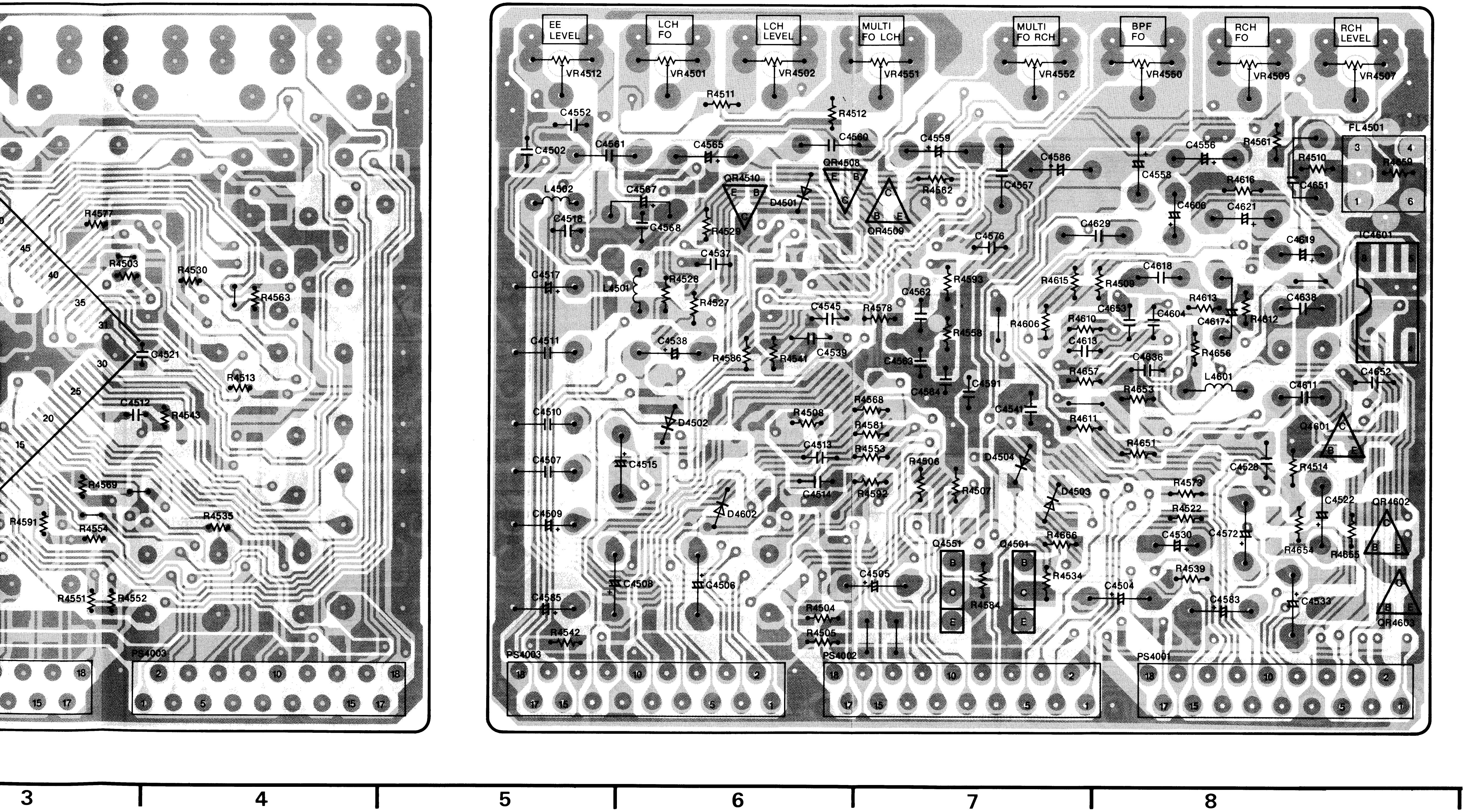
INPUT/OUTPUT PACK C.B.A.			
Transistor		**Integrated Circuit**	
Q3901	A-6	IC4901	B-1
Q3902	B-4	IC3901	B-5
Q3903	B-3	IC3902	A-6
Q3904	A-2	**Connector**	
Q3905	B-3	PS3951	A-1
Q3906	C-5	PS3952	A-3
Q3907	C-5	P3901	C-5
Transistor & Resistor		P3903	C-5
QR3902	B-4	P4801	B-8
QR3903	B-3	P4802	B-7

ADDRESS INFORMATION


FRONT INPUT C.B.A. (VEP00S04A)
R3904
C3915
R3903
R3924
QR3902
QR3903
R3926
R3925
R3906
J1
TEST
OFF ↔ ON
C3905
Q3902
C3914
C3904
R3910
D3901
C3902
L3901
R3907
R3908
C3903
EDITING CONTROL
P3901
P3903
C3916
C3910
C3901
Q3906
Q3907
IC3901
R3909
R3933
R3935
R3929
R3919
D3905
R3928
R3937
R3905
R3934
R3930
R3931
C3911
C3908
X3901
C3909
R3936
R3927
C3917
R3912
C3912
R3911
Q3905
Q3903
R3901
R3916
IC3902
C3906
D3904
Q3901
R3918
R3917
C3907
L3902
R4910
R4909
L4907
L4908
C4925
C4922
C4923
C4924
CH2 (R) LINE OUT
CH1 (L) LINE OUT
D3903
L3903
PS3952
FL3901
R3913
R3915
R3914
P4802
P4801
C4803
R4801
C4802
R4802
L4802
C4801
R4803
L4801
C4804
J3901
SYNCRO EDIT
CH3 VIDEO IN
CH3 (L) AUDIO IN
CH3 (R) AUDIO IN
3
4
5
6
7
8

4-22. Hi-Fi AUDIO PACK C.B.A. (VEP04361B)


C
B
A
1
2
3
4
5
6
7
IC4501
51
50
55
45
60
40
65
35
70
31
75
30
80
25
81
20
85
15
90
10
95
5
100
1
R4583
C4616
R4577
R4503
R4530
R4563
C4521
R4513
C4512
R4543
R4649
R4603
R4569
R4591
R4554
R4535
C4503
R4594
R4551
R4552
R4587
R4588
C4592
PS4001
PS4002
PS4003
EE LEVEL
LCH FO
LCH LEVEL
MULTI FO LCH
VR4512
VR4501
VR4502
VR4551
R4511
R4512
C4552
C4502
C4561
C4565
C4560
C4559
QR4508
QR4510
D4501
QR4509
R4582
L4502
C4567
C4518
C4568
R4529
C4537
C4576
C4517
L4501
R4528
R4527
C4545
R4578
C4562
R4593
C4511
C4538
R4586
R4541
C4539
R4558
C4563
C4564
C4591
C4510
D4502
R4508
R4568
R4581
C4515
C4513
R4553
D4504
C4507
C4514
R4592
R4506
R4507
C4509
D4602
Q4551
C4505
C4585
C4508
C4506
R4504
R4584
R4542
R4505
PS4002
B
C
E

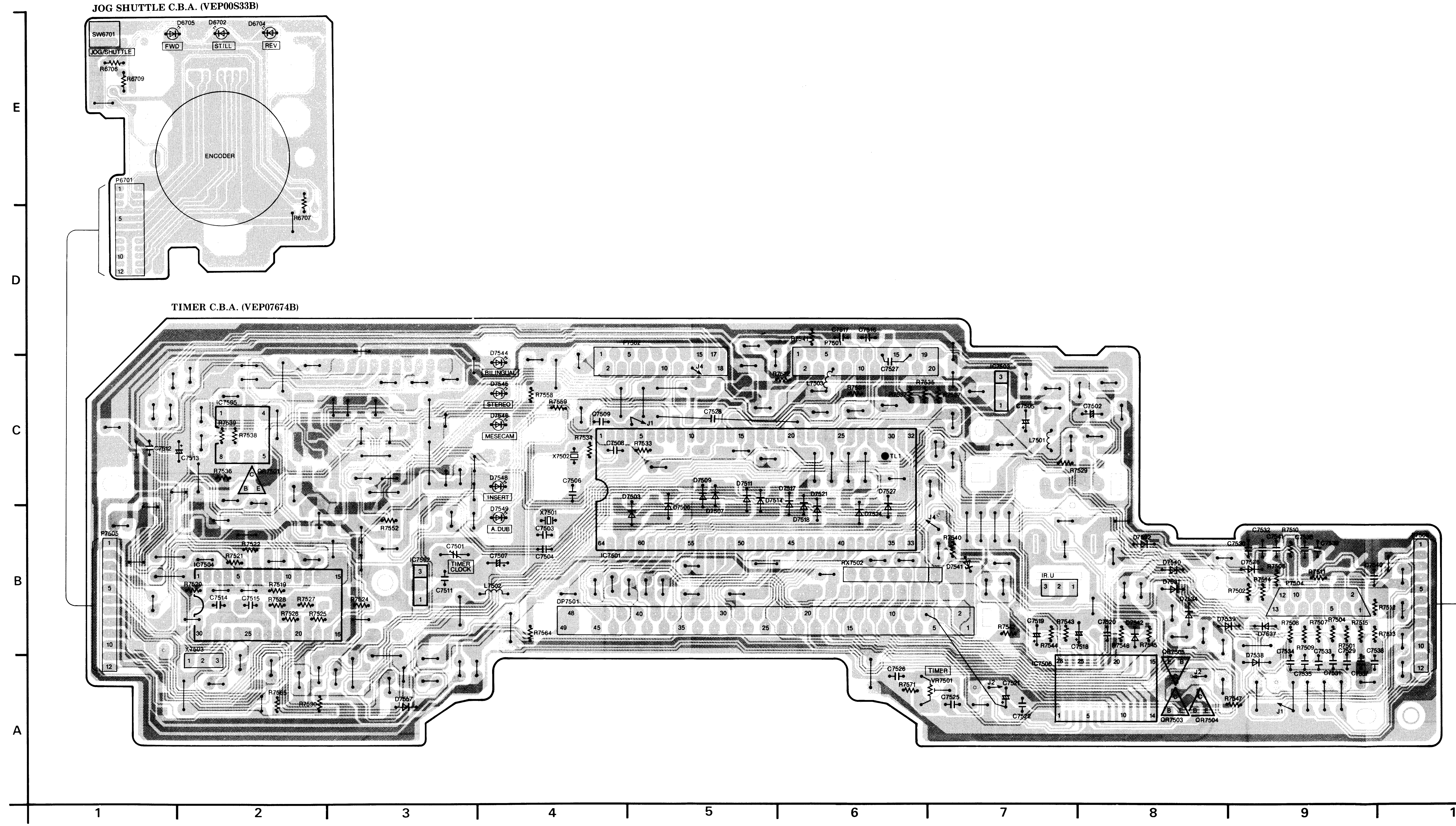


EE LEVEL
LCH FO
LCH LEVEL
MULTI FO LCH
MULTI FO RCH
BPF FO
RCH FO
RCH LEVEL
VR4512
VR4501
VR4502
VR4551
VR4552
VR4550
VR4509
VR4507
FL4501
IC4601
QR4510
QR4508
QR4509
QR4602
QR4603
Q4551
Q4501
Q4601
D4501
D4502
D4504
D4503
D4602
L4502
L4501
L4601
C4521
C4502
C4552
C4561
C4565
C4560
C4559
C4586
C4557
C4558
C4556
C4551
C4567
C4568
C4518
C4537
C4517
C4511
C4538
C4545
C4539
C4562
C4563
C4564
C4591
C4541
C4576
C4629
C4606
C4621
C4619
C4618
C4653
C4604
C4617
C4638
C4613
C4636
C4611
C4652
C4626
C4510
C4507
C4509
C4585
C4515
C4508
C4506
C4513
C4514
C4505
C4504
C4530
C4572
C4522
C4533
C4583
C4512
R4577
R4503
R4530
R4563
R4513
R4543
R4569
R4591
R4554
R4535
R4551
R4552
R4511
R4512
R4529
R4526
R4527
R4586
R4541
R4578
R4593
R4558
R4582
R4561
R4510
R4559
R4616
R4615
R4509
R4606
R4610
R4613
R4612
R4656
R4657
R4653
R4611
R4651
R4514
R4573
R4522
R4539
R4654
R4655
R4666
R4534
R4584
R4508
R4568
R4581
R4553
R4592
R4506
R4507
R4504
R4505
R4542
PS4003
PS4002
PS4001
3
4
5
6
7
8

Hi-Fi AUDIO PACK C.B.A.	
Transistor	
Q4501	A-7
Q4551	A-7
Q4601	B-8
Transistor & Resistor	
QR4508	C-6
QR4509	C-7
QR4510	C-6
QR4602	B-8
QR4603	A-8
Integrated Circuit	
IC4501	B-3
IC4601	C-8
Adjustment	
VR4501	C-6
VR4502	C-6
VR4507	C-8
VR4509	C-8
VR4512	C-5
VR4550	C-8
VR4551	C-7
VR4552	C-7
Connector	
PS4001	A-1
PS4001	A-8
PS4002	A-2
PS4002	A-6
PS4003	A-4
PS4003	A-5

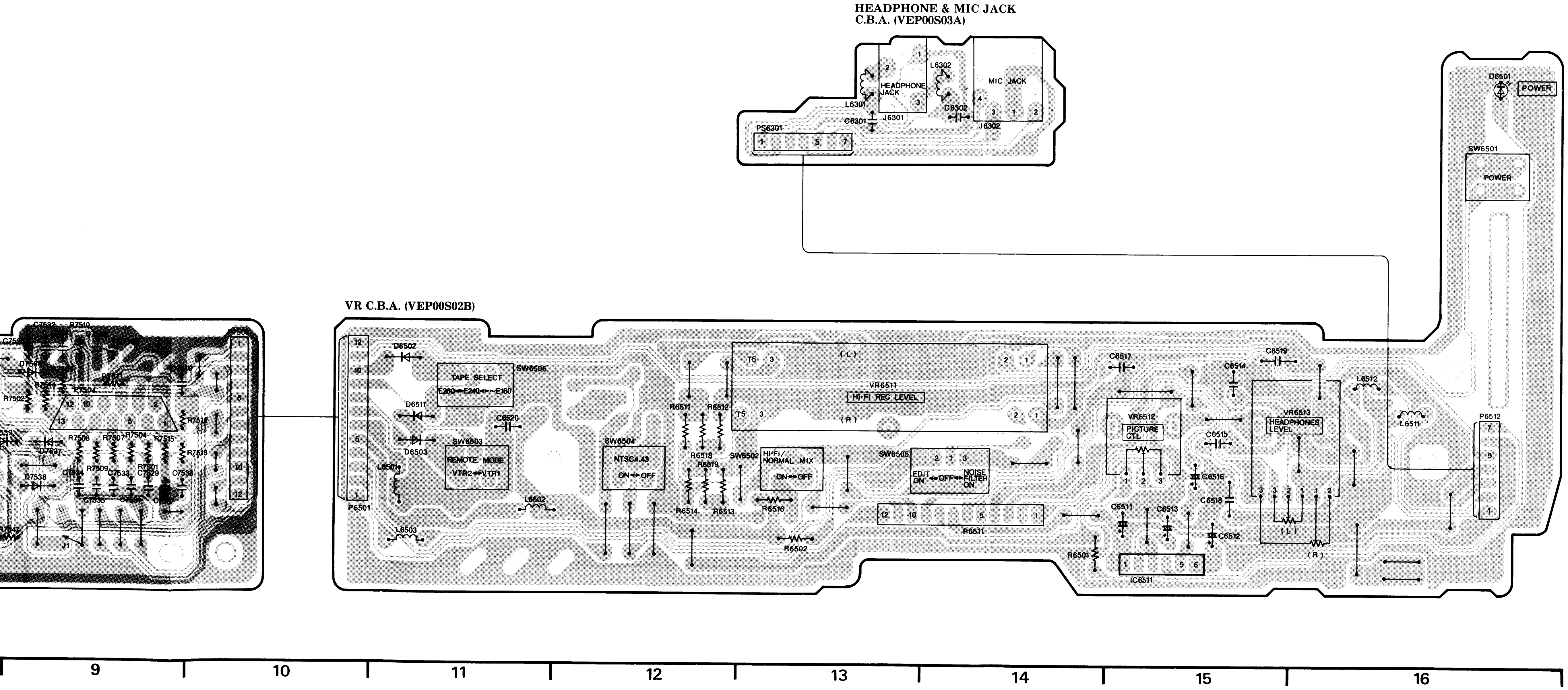
ADDRESS INFORMATION

4-23. TIMER C.B.A. (VEP07674B) & VR C.B.A. (VEP00S02B)


JOG SHUTTLE C.B.A. (VEP00S33B)
SW6701
JOG/SHUTTLE
D6705
D6702
D6704
FWD
STILL
REV
R6706
R6709
ENCODER
P6701
R6707
TIMER C.B.A. (VEP07674B)
D7544
BILINGUAL
D7545
STEREO
D7546
MESECAM
D7548
INSERT
D7549
A.DUB
IC7505
R7539
R7538
QR7501
C7512
C7513
R7536
P7505
IC7504
R7522
R7521
R7520
C7514
C7515
R7519
R7528
R7527
R7526
R7525
R7524
X7503
R7565
R7530
D7557
R7552
IC7502
C7501
TIMER CLOCK
C7507
C7511
L7502
R7558
R7559
R7564
X7501
C7503
C7504
X7502
C7506
R7534
C7509
C7508
R7533
J1
C7528
P7502
J4
IC7501
TL1
D7503
D7506
D7509
D7507
D7511
D7514
D7517
D7518
D7521
D7527
D7524
DP7501
RX7502
P7501
L7503
C7527
R7535
C7505
C7502
L7501
R7529
R7540
D7541
IR.U
C7519
R7543
R7544
C7518
C7520
D7542
R7546
R7545
IC7506
QR7505
QR7503
QR7504
J2
R7547
C7526
R7571
TIMER
VR7501
C7525
C7521
C7522
D7540
D7539
D7537
D7538
R7502
R7514
P7504
R7512
R7513
R7508
R7507
R7504
R7515
R7509
R7501
C7534
C7533
C7529
C7535
C7531
C7532
R7510
C7536
E
D
C
B
A
1
2
3
4
5
6
7
8
9

TIMER & VR C.B.A.	
Transistor & Resistor	
QR7501	C-2
QR7503	A-8
QR7504	A-8
QR7505	A-8
Integrated Circuit	
IC6511	A-15
IC7501	C-4
IC7502	B-3
IC7503	C-7
IC7504	B-2
IC7505	C-2
Adjustment	
C7501	B-3
VR6511	B-13
VR6512	B-15
VR6513	B-15
VR7501	A-7
Connector	
P6501	A-10
P6511	A-14
P6512	B-16
P6701	E-1
P7501	D-6
P7502	D-4
P7504	B-9
P7505	B-1
P7506	A-8
PS6301	C-13

ADDRESS INFORMATION


HEADPHONE & MIC JACK
C.B.A. (VEP00S03A)
HEADPHONE JACK
J6301
L6301
C6301
L6302
C6302
MIC JACK
J6302
PS6301
D6501
POWER
SW6501
POWER
VR C.B.A. (VEP00S02B)
P6501
D6502
D6511
D6503
L6501
L6503
L6502
TAPE SELECT
E260↔E240↔~E180
SW6506
C6520
SW6503
REMOTE MODE
VTR2↔VTR1
SW6504
NTSC4.43
ON↔OFF
R6511
R6512
R6518
R6519
R6514
R6513
SW6502
Hi-Fi/
NORMAL MIX
ON↔OFF
R6516
R6502
T5
(L)
(R)
VR6511
Hi-Fi REC LEVEL
SW6505
EDIT ON↔OFF↔NOISE FILTER ON
P6511
C6517
VR6512
PICTURE CTL
C6511
C6513
R6501
IC6511
C6519
C6514
C6515
C6516
C6518
C6512
VR6513
HEADPHONES LEVEL
L6512
L6511
P6512
C7532
R7510
R7502
R7506
R7507
R7504
R7515
R7512
R7513
R7509
C7533
C7534
R7501
C7529
C7538
C7535
D7538
D7537
J1
9
10
11
12
13
14
15
16

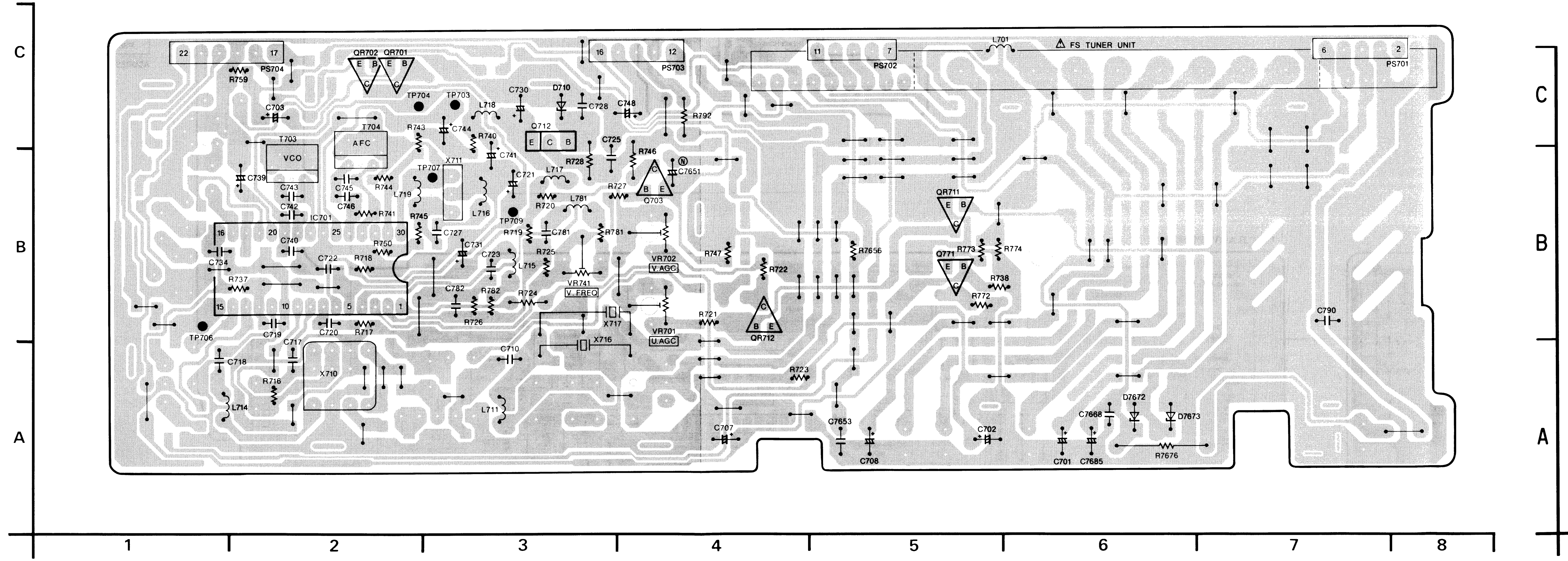
4-24. TV DEMODULATOR PACK C.B.A. (VEP07643E)

TV DEMODULATOR PACK C.B.A.

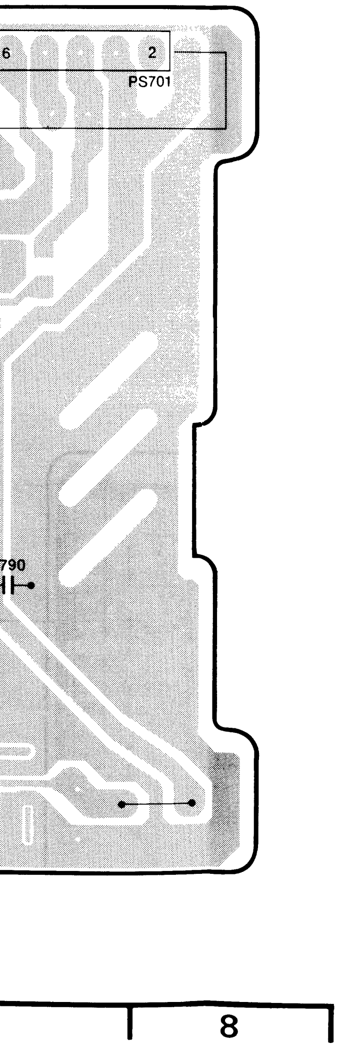
Transistor	
Q703	B-4
Q712	C-3
Q771	B-5
Transistor & Resistor	
QR701	C-2
QR702	C-2
QR711	B-5
QR712	B-4
Integrated Circuit	
IC701	B-2
Test Point	
TP703	C-3
TP704	C-2
TP706	B-1
TP707	B-3
TP709	B-3

Adjustment	
T703	C-2
T704	C-2
VR701	B-4
VR702	B-4
VR741	B-3
Connector	
PS701	C-8
PS702	C-5
PS703	C-4
PS704	C-2

ADDRESS INFORMATION


C
B
A
1
2
3
4
5
6
7
8
22
17
PS704
R759
QR702
QR701
E B E B
C
TP704
TP703
C703
T703
VCO
T704
AFC
R743
C744
R740
C741
L718
C730
D710
C728
C748
Q712
E C B
C725
R728
R746
C7651
R792
16
12
PS703
11
7
PS702
L701
⚠ FS TUNER UNIT
6
2
PS701
C739
C743
C742
C745
C746
R744
R741
IC701
L719
TP707
X711
L716
C721
L717
R720
L781
R727
Q703
TP709
R745
16
20
25
30
C740
R750
C734
C722
R718
R737
15
10
5
1
C727
C731
C723
L715
R719
C781
R725
R781
VR702
V.AGC
VR741
V.FREQ
R747
R722
R7656
QR711
E B
C
Q771
R773
R774
R738
R772
C782
R782
R724
R726
X717
X716
VR701
U.AGC
R721
QR712
C B E
C790
TP706
C719
C720
R717
C717
C718
R716
X710
L714
C710
L711
R723
C707
C7653
C708
C702
C7668
D7672
D7673
C701
C7685
R7676

K C.B.A.	
ment	
	C-2
	C-2
01	B-4
02	B-4
41	B-3
ctor	
01	C-8
02	C-5
03	C-4
04	C-2


6
2
PS701
790
8

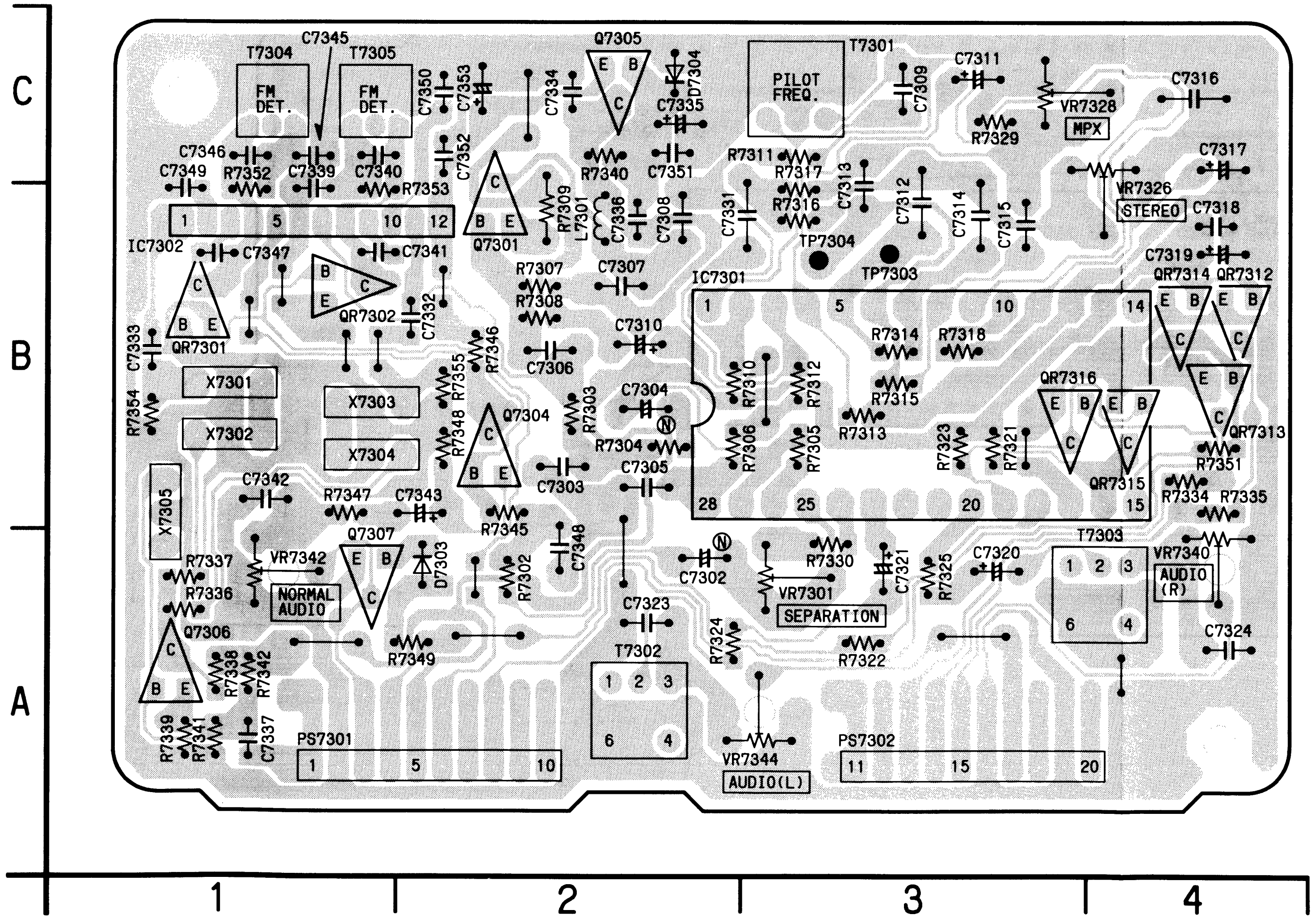
4-25. DECODER PACK C.B.A. (VEP07671C)

DECODER PACK C.B.A.

Transistor	
Q7301	B-2
Q7304	B-2
Q7305	C-2
Q7306	A-1
Q7307	A-1
Transistor & Resistor	
QR7301	B-1
QR7302	B-1
QR7312	B-4
QR7313	B-4
QR7314	B-4
QR7315	B-4
QR7316	B-3
Integrated Circuit	
IC7301	B-3
IC7302	B-1
Test Point	
TP7303	B-3
TP7304	B-3

Adjustment	
T7301	C-3
T7302	A-2
T7303	A-4
T7304	C-1
T7305	C-1
VR7301	A-3
VR7326	C-4
VR7328	C-3
VR7340	A-4
VR7342	A-1
VR7344	A-3
Connector	
PS7301	A-1
PS7302	A-3

ADDRESS INFORMATION

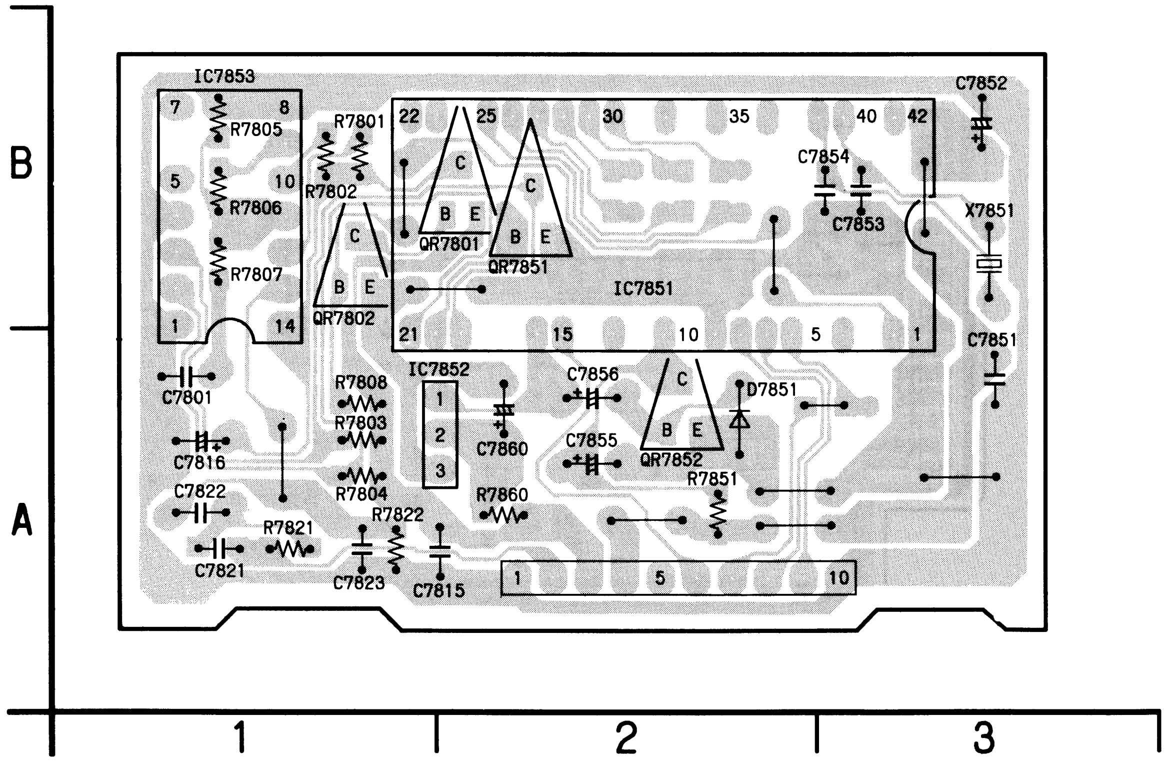

C
B
A
1
2
3
4
T7304
C7345
T7305
FM DET.
FM DET.
C7350
C7353
C7334
Q7305
D7304
C7335
PILOT FREQ.
T7301
C7309
C7311
VR7328
MPX
R7329
C7316
C7346
C7349
R7352
C7339
C7340
R7353
C7352
Q7301
R7309
L7301
C7336
C7308
R7340
C7351
R7311
R7317
R7316
C7313
C7331
C7312
C7314
C7315
VR7326
STEREO
C7317
C7318
C7319
IC7302
C7347
C7341
QR7301
QR7302
C7332
C7333
R7354
TP7304
TP7303
IC7301
R7307
R7308
C7307
C7310
C7306
R7346
R7355
R7348
Q7304
R7303
C7304
R7304
C7305
C7303
R7314
R7318
R7315
R7313
R7310
R7312
R7306
R7305
R7323
R7321
QR7316
QR7315
QR7314
QR7312
QR7313
R7351
R7334
R7335
X7301
X7302
X7303
X7304
X7305
C7342
R7347
C7343
R7345
Q7307
D7303
R7302
C7348
C7302
R7330
VR7301
SEPARATION
C7321
R7325
C7320
T7303
VR7340
AUDIO (R)
C7324
R7337
VR7342
NORMAL AUDIO
R7336
Q7306
R7338
R7342
R7349
C7323
T7302
R7324
R7322
R7339
R7341
C7337
PS7301
VR7344
AUDIO(L)
PS7302
1
5
10
12
14
15
20
25
28
11

4-26. VPS PACK C.B.A. (VEP07575A)

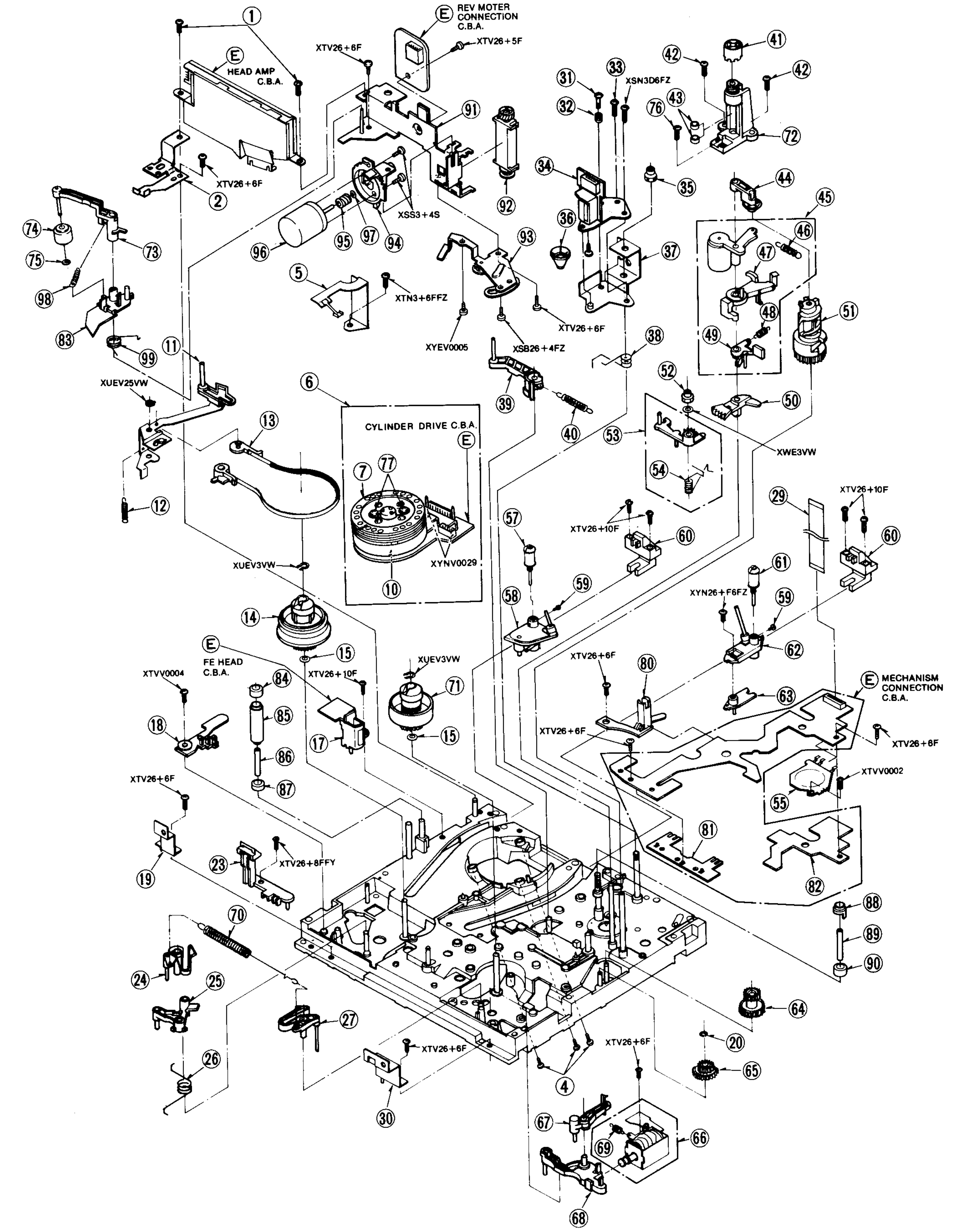
VPS PACK C.B.A.

Transistor & Resistor	
QR7801	B-2
QR7802	B-1
QR7851	B-2
QR7852	A-2
Integrated Circuit	
IC7851	B-2
IC7852	A-2
IC7853	B-1

ADDRESS INFORMATION


B
A
1
2
3
IC7853
R7805
R7806
R7807
R7801
R7802
QR7801
QR7851
QR7802
IC7851
C7852
C7854
C7853
X7851
C7851
C7801
C7816
C7822
C7821
R7821
R7808
R7803
R7804
IC7852
C7860
R7860
R7822
C7823
C7815
C7856
C7855
QR7852
D7851
R7851
1
5
10
14
21
22
25
30
35
40
42
15

SECTION 5
EXPLODED VIEWS & PARTS LIST
5-1. EXPLODED VIEW & MECHANICAL REPLACEMENT PARTS LIST
❶ CHASSIS PARTS SECTION (1)



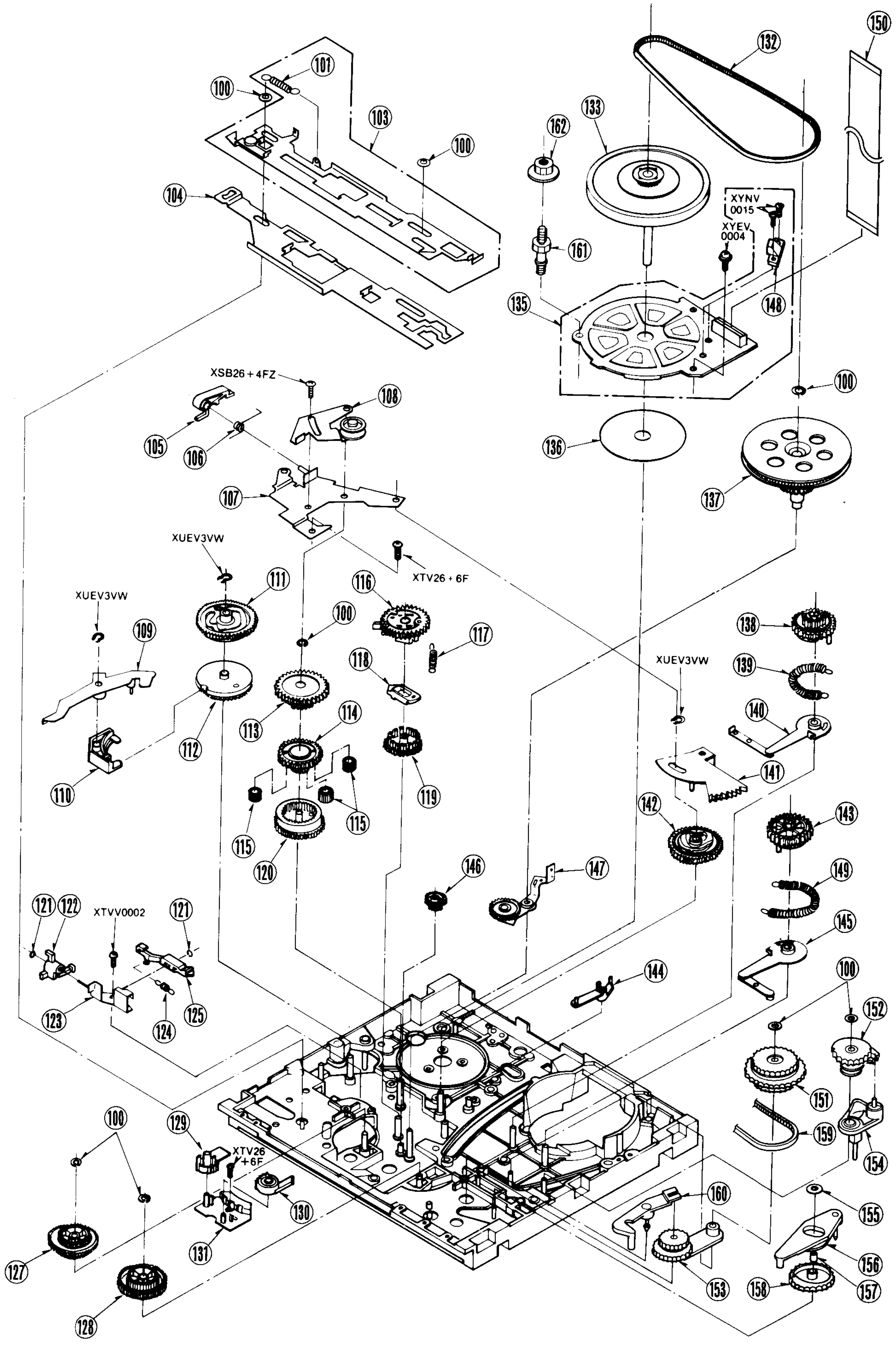
Ⓔ REV MOTER CONNECTION C.B.A.
Ⓔ HEAD AMP C.B.A.
XTV26+6F
XTV26+5F
XSN3D6FZ
XSS3+4S
XTN3+6FFZ
XYEV0005
XSB26+4FZ
XUEV25VW
CYLINDER DRIVE C.B.A. Ⓔ
XYNV0029
XWE3VW
XUEV3VW
XTV26+10F
XYN26+F6FZ
Ⓔ FE HEAD C.B.A.
XTVV0004
XUEV3VW
Ⓔ MECHANISM CONNECTION C.B.A.
XTVV0002
XTV26+8FFY
① ② ④ ⑤ ⑥ ⑦ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑰ ⑱ ⑲ ⑳
㉓ ㉔ ㉕ ㉖ ㉗ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵
㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿ (51) (52) (53) (54) (55) (57) (58) (59) (60)
(61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77)
(80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99)

1. CHASSIS PARTS SECTION (1)

Note:1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1(1)		VHD0418	HEAD AMP SET SCREW	2	
2(1)		VMA7174	HEAD AMP MOUNT ANGLE	1	
4(1)		VHD0342	CYLINDER SCREW	3	
5(1)		VXA2702	EARTH PLATE UNIT	1	
6(1)		VEG0967	CYLINDER UNIT	1	<!>
7(1)		VEH0572	UPPER CYLINDER UNIT	1	
10(1)		VSC2188	CYLINDER C.B.A.SHIELD PLATE	1	
11(1)		VXL1855	TENSION ARM (1) UNIT	1	
12(1)		VMB1563	TENSION SPRING	1	
13(1)		VXZ0267	TENSION BAND UNIT	1	
14(1)		VXR0179	SUPPLY REEL TABLE UNIT	1	
15(1)		VMX1171	REEL WASHER (0.5mm)	2	
15(1)		VMX1239	REEL WASHER (0.3mm)	2	
15(1)		VMX1238	REEL WASHER (0.2mm)	2	
17(1)		VBS0038	FE HEAD	1	
18(1)		VMD1316	TENSION SPRING HOOK	1	
19(1)		VMA6895	MOUNT ANGLE (L)	1	
20(1)		VMX1079	CUT WASHER	1	
23(1)		VES0486	SAFETY SW	1	
24(1)		VXZ0259	SUPPLY MAIN BRAKE UNIT	1	
25(1)		VXZ0274	SUPPLY SOFT BRAKE(1)UNIT	1	
26(1)		VMB1564	SUPPLY SOFT BRAKE SPRING	1	
27(1)		VXZ0262	TAKE UP MAIN BRAKE UNIT	1	
29(1)		VWJ0615	FLEXIBLE CARD(15P)	1	P6001-P1504
30(1)		VMA6896	MOUNT ANGLE (R)	1	
31(1)		VHD0322	ADJUST SCREW	1	
32(1)		VMB1251	ADJUST SPRING	1	
33(1)		VHD0089B	AZIMUTH ADJUST SCREW	1	
34(1)		VED0082	A/C HEAD (1) UNIT	1	
35(1)		VHN0063	M4 NYLON NUT	1	
36(1)		VHN0110	ADJUST NUT	1	
37(1)		VMA7831	HEAD BASE	1	
38(1)		VMB1567	A/C HEAD SPRING	1	
39(1)		VXL1857	SUB LOADING ARM (1) UNIT	1	
40(1)		VMB1566	SUB POST SPRING	1	
41(1)		VXQ0006	THRUST SCREW UNIT	1	
42(1)		VHD0317	HOUSING SCREW	2	
43(1)		VMX1033	OIL SEAL	2	
44(1)		VMX1353	PINCH CAM CAP	1	
45(1)		VXL1858	PRESSURE ROLLER UNIT	1	
46(1)		VMB1941	PIN PRESSURE SPRING	1	
47(1)		VML2232	PINCH PRESSURE ARM	1	
48(1)		VMB1569	PINCH PRESSURE ARM RELEASE SPRING	1	
49(1)		VML1874	PINCH LIFT ARM	1	
50(1)		VDG0597	P5 PULL OUT SECTOR GEAR	1	
51(1)		VDG0421	PINCH CAM	1	
52(1)		VHD0045	M3 NYLON NUT	1	
53(1)		VXL2027	P5 UNIT	1	
54(1)		VMB2718	P5 SPRING	1	
55(1)		VSS0175	MODE SW	1	
57(1)		VXP0863	ROLLER POST (S) UNIT	1	
58(1)		VXA4106	INCLIND BASE (S)(1)UNIT	1	
59(1)		VHD0133	ROLLER POST SCREW	2	
60(1)		VMD0910	POST STOPPER	2	
61(1)		VXP1094	ROLLER POST (T) UNIT	1	
62(1)		VXA3876	INCLIND BASE(T)(1)UNIT	1	
63(1)		VXA2687	INCLIND ADJUST PLATE UNIT	1	
64(1)		VDG0483	PINCH SPEED DOWN GEAR	1	
65(1)		VDG0664	CONNECTION GEAR	1	
66(1)		VXA3735	SOLENOID UNIT	1	
67(1)		VXA2692	KICK ROD UNIT	1	
68(1)		VML1849	SOLENOID LEVER	1	
69(1)		VMB1553	KICK ROD SPRING	1	
70(1)		VMB2012	MAIN BRAKE SPRING	1	
71(1)		VXR0176	TAKE UP REEL TABLE UNIT	1	
72(1)		VXD0101	HOUSING UNIT	1	
73(1)		VXL2086	CLEANNER ARM (2) UNIT	1	
74(1)		VXP1341	CLEANNER ROLLER UNIT	1	
75(1)		VMX1061	SNAP WASHER (A)	1	
76(1)		VHD0374	HOUSING SCREW	1	
77(1)		VHD0553	UPPER CYLINDER SCREW	2	
80(1)		VXA3520	LED HOLDER UNIT	1	
81(1)		VMA7829	REINFORCEMENT PLATE (F)	1	
82(1)		VMA7830	REINFORCEMENT PLATE (R)	1	
83(1)		VML2510	CLEANNER ARM (B)	1	
84(1)		VMX1088	SUPPLY UPPER LIMITER	1	
85(1)		VDP1072	SUPPLY ROLLER	1	
86(1)		VMX1581	P1 COLLAR	1	
87(1)		VMX1533	SUPPLY LOWER LIMITER	1	
88(1)		VMX1544	P4 UPPER LIMITER	1	
89(1)		VMX1568	P4 SLEEVE	1	
90(1)		VMX1534	P4 LOWER LIMITER	1	
91(1)		VXA4317	MOTOR MOUNT PLATE UNIT	1	
92(1)		VXA3517	WORM WHEEL BEARING UNIT	1	
93(1)		VXA4315	TENSION PULLEY BASE (A) UNIT	1	
94(1)		VXA3564	REEL MOTOR BRACKET UNIT	1	
95(1)		VXP1208	WORM GEAR UNIT	1	
96(1)		VEM0320	REV MOTOR	1	<!>
97(1)		VMX1734	WORM WASHER	1	
98(1)		VMB2263	CLEANNER ARM SPRING (A)	1	
99(1)		VMB2264	CLEANNER ARM SPRING (B)	1	

❷ CHASSIS PARTS SECTION (2)



2. CHASSIS PARTS SECTION (2)

Note:1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

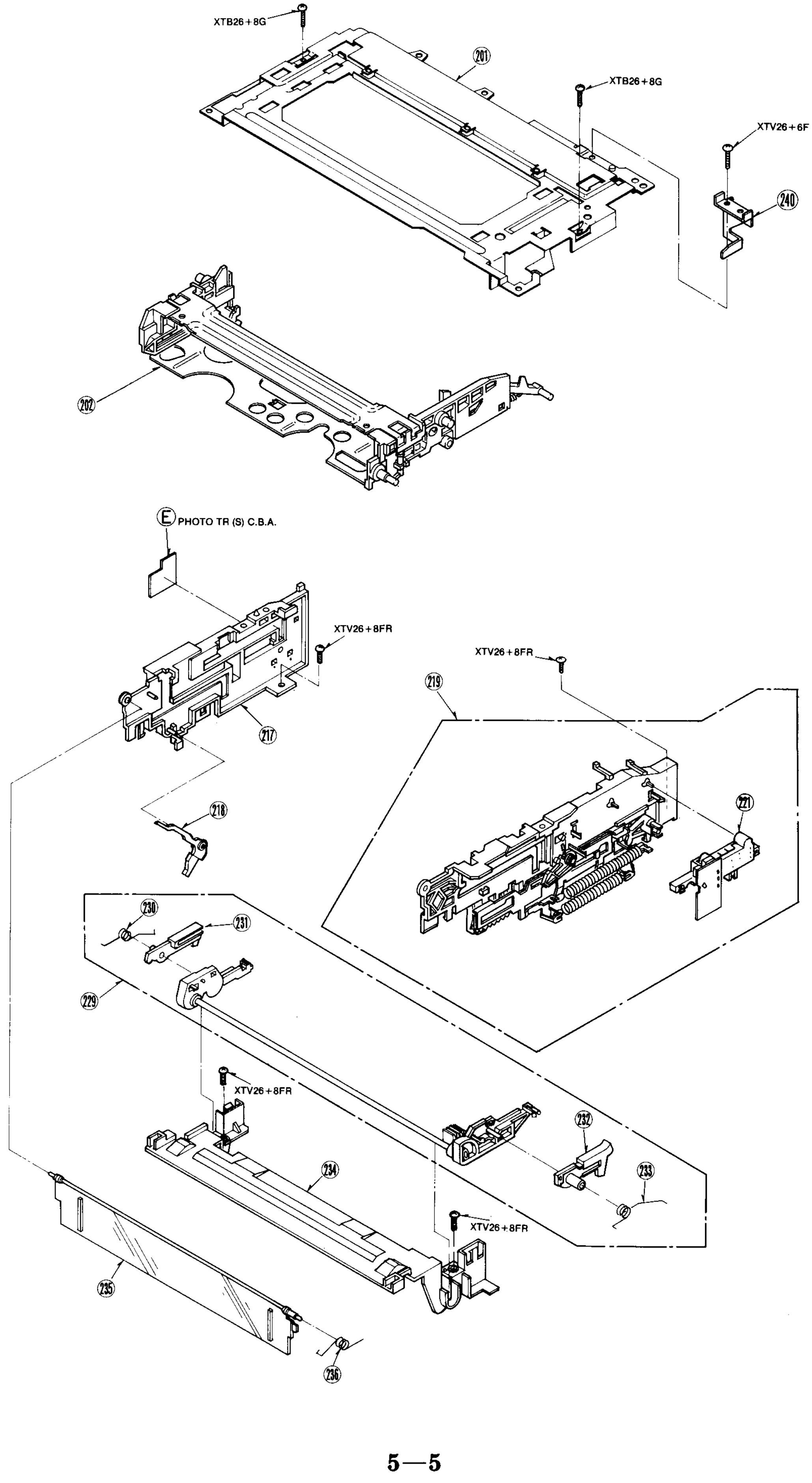
Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
100(2)		VMX1079	CUT WASHER	8	
101(2)		VMB1883	SUB LEVER SPRING	1	
103(2)		VXA3510	SUB LEVER UNIT	1	
104(2)		VMM0204	MAIN LEVER	1	
105(2)		VXL2088	SS BRAKE ARM UNIT	1	
106(2)		VMB1588	SS BRAKE SPRING	1	
107(2)		VXA3512	SS BRAKE BASE (1) UNIT	1	
108(2)		VXA3516	TENSION ROLLER UNIT	1	
109(2)		VXL1632	CAM FOLLOWER ARM UNIT	1	
110(2)		VML1861	DETENT ARM	1	
111(2)		VDG0574	MAIN CAM GEAR	1	
112(2)		VDG0343	SUB CAM GEAR	1	
113(2)		VDG0348	CENTRE GEAR	1	
114(2)		VDG0422	RETAINER GEAR	1	
115(2)		VDG0345	PLANET GEAR	3	
116(2)		VDG0547	CLUTCH DISK	1	
117(2)		VMB1558	CLUTCH SPRING	1	
118(2)		VDG0350	LOCK SLIDE GEAR	1	
119(2)		VDG0335	DRIVE DISK	1	
120(2)		VDG0342	RING GEAR	1	
121(2)		VMX0967	CUT WASHER	2	
122(2)		VML1859	CHANGE LEVER	1	
123(2)		VXA2672	RELEASE LEVER (1) UNIT	1	
124(2)		VMB1557	RELEASE SPRING	1	
125(2)		VML1860	RELEASE LEVER	1	
127(2)		VXP1031	TAKE UP REEL GEAR UNIT	1	
128(2)		VXP0981	SUPPLY REEL GEAR UNIT	1	
129(2)		VML1858	RETURN LEVER (R)	1	
130(2)		VML1857	RETURN LEVER (L)	1	
131(2)		VMD0913	STOPPER BASE	1	
132(2)		VDV0169	TIMING BELT	1	
133(2)		VXP1113	ROTOR UNIT	1	
135(2)		VEK4097	STATOR UNIT	1	<!>
136(2)		VMA6847	SUB PLATE	1	
137(2)		VXP1050	CENTRE PULLEY UNIT	1	
138(2)		VDG0564	LOADING GEAR (T)	1	
139(2)		VMB1555	LOADING SPRING (T)	1	
140(2)		VXL1489	LOADING ARM (T)(1) UNIT	1	
141(2)		VXA3515	SECTOR GEAR UNIT	1	
142(2)		VDG0516	LOADING CAM GEAR	1	
143(2)		VDG0419	LOADING GEAR (S)	1	
144(2)		VML2266	PLAY CONTROL ARM	1	
145(2)		VXL1487	LOADING ARM (S)(1) UNIT	1	
146(2)		VDG0546	INTERMEDIATE GEAR	1	
147(2)		VXL1861	PLAY ARM UNIT	1	
148(2)		VBK0048	FG HEAD	1	
149(2)		VMB1746	LOADING SPRING(S)	1	
150(2)		VWJ0597	FLEXIBLE CARD (15P)	1	P2001-CAP STATOR UNIT
151(2)		VXP1029	REVIEW CLUTCH UNIT	1	
152(2)		VXP1030	TENSION RELEASE CLUTCH UNIT	1	
153(2)		VXL1851	REVIEW ARM UNIT	1	
154(2)		VML2197	TENSION RELEASE LEVER	1	
155(2)		VMX1536	CUT WASHER	1	
156(2)		VML2233	SUB CAM FOLLOWER	1	
157(2)		VMX1495	RUBBER STOPPER	1	
158(2)		VDG0517	SUB LEVER CAM	1	
159(2)		VDV0199	REVIEW CLUTCH TIMING BELT	1	
160(2)		VML2200	REVIEW CONTROL LEVER	1	
161(2)		VHD0431	STATOR SPACER SCREW	1	
162(2)		VHN0102	STATOR NUT	1	

3. CASSETTE UP MECHANISM SECTION

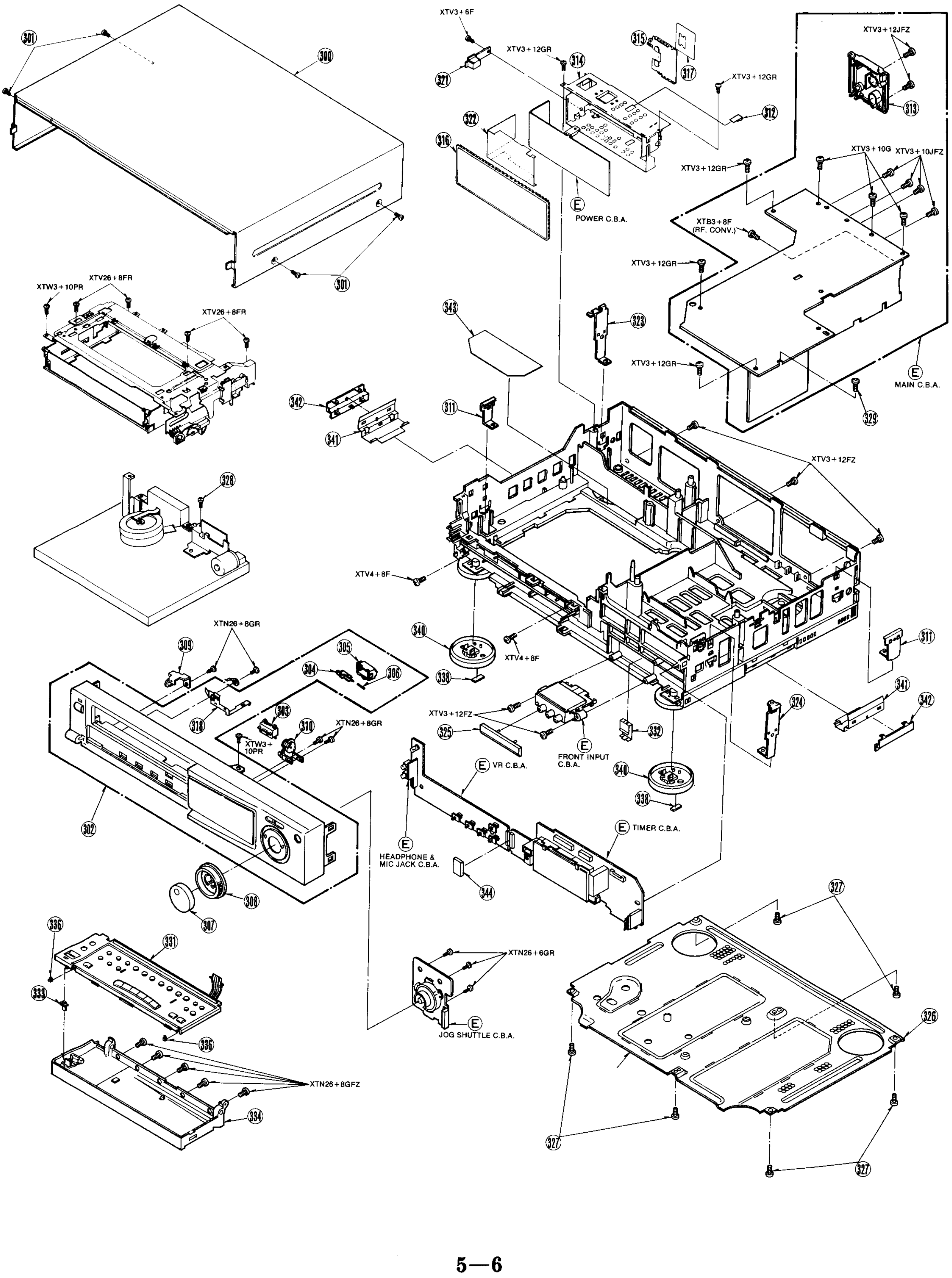
Note:1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
201(3)		VMA7223	TOP PLATE	1	
202(3)		VXA3840	CASSETTE HOLDER UNIT	1	
217(3)		VMD1890	SIDE PLATE (L)	1	
218(3)		VML1880	OPENER LEVER	1	
219(3)		VXA4076	SIDE PLATE (R) UNIT	1	
221(3)		VXA4642	SLIDE SW UNIT	1	
229(3)		VXP0987	MAIN SHAFT UNIT	1	
230(3)		VMB1836	SUB WIPER SPRING (L)	1	
231(3)		VML1878	SUB WIPER ARM (L)	1	
232(3)		VML1879	SUB WIPER ARM (R)	1	
233(3)		VMB1837	SUB WIPER SPRING (R)	1	
234(3)		VMA6900	CASSETTE GUIDE	1	
235(3)		VKF1212	BLINDER PANEL	1	
236(3)		VMB1258	BLINDER SPRING	1	
240(3)		VMA7224	CASSETTE HOLDER ANGLE	1	

❸ CASSETTE UP MECHANISM SECTION


XTB26+8G
(201)
XTB26+8G
XTV26+6F
(240)
(202)
Ⓔ PHOTO TR (S) C.B.A.
XTV26+8FR
XTV26+8FR
(219)
(217)
(221)
(218)
(230)
(231)
(229)
XTV26+8FR
(232)
(234)
(233)
XTV26+8FR
(235)
(236)

❹ CASING PARTS SECTION



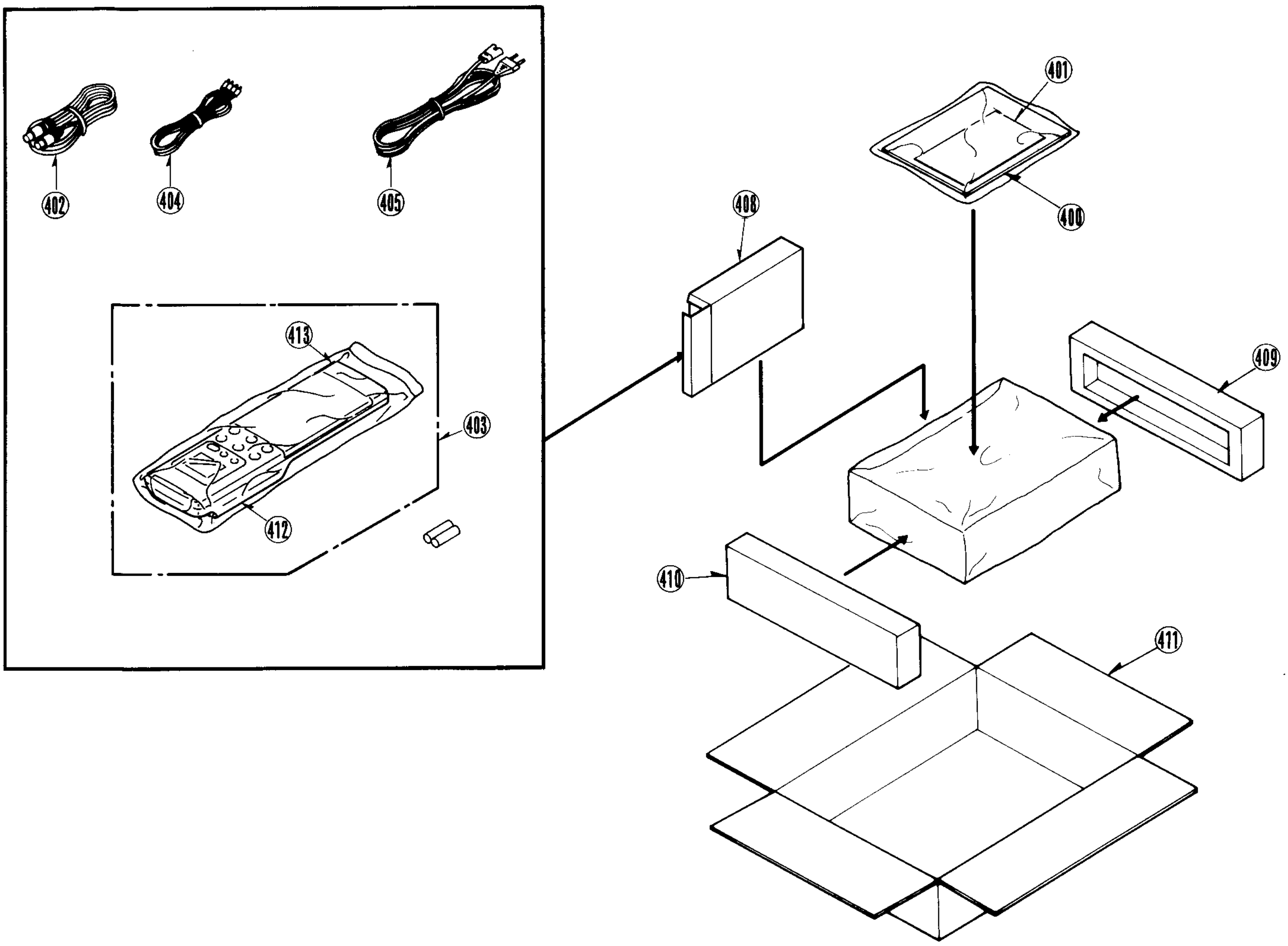
301
300
301
XTW3+10PR
XTV26+8FR
XTV26+8FR
328
XTV3+6F
321
XTV3+12GR
314
315
317
XTV3+12GR
312
322
316
E
POWER C.B.A.
XTV3+12JFZ
313
XTV3+10G
XTV3+10JFZ
XTV3+12GR
XTB3+8F (RF. CONV.)
XTV3+12GR
XTV3+12GR
E
MAIN C.B.A.
329
343
323
342
341
311
XTV3+12FZ
XTV4+8F
340
338
XTV4+8F
311
341
342
324
XTV3+12FZ
325
E
FRONT INPUT C.B.A.
332
340
338
XTN26+8GR
309
305
304
306
318
303
310
XTN26+8GR
XTW3+10PR
302
E
VR C.B.A.
E
HEADPHONE & MIC JACK C.B.A.
E
TIMER C.B.A.
344
307
308
336
331
333
336
XTN26+8GFZ
334
XTN26+6GR
E
JOG SHUTTLE C.B.A.
327
326
327
327

4. CASING PARTS SECTION

Note:1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
300(4)		VGM0697	TOP PANEL	1	
301(4)		VHD0165	TOP PANEL SCREW	4	
302(4)		VYP4122	FRONT PANEL (2) UNIT	1	
303(4)		VGQ2807	FPC HOLDER	1	
304(4)		VGU4498	DOOR LOCK LEVER	1	
305(4)		VGU4829	LOCK LEVER HOLDER	1	
306(4)		VMB1963	LOCK LEVER SPRING	1	
307(4)		VXU1091	JOG KNOB UNIT	1	
308(4)		VGU5854	SHUTTLE KNOB	1	
309(4)		VXA4760	ANGLE (L) UNIT	1	
310(4)		VXA4761	ANGLE (R) UNIT	1	
311(4)		VMP3321	TOP HOLDER ANGLE (A)	2	
312(4)		VMC0357	Tr. HOLDER SPRING	1	
313(4)		VJH0617	RF & ANT. BOARD	1	
314(4)		VXA4756	POWER SHIELD PLATE (MAIN)	1	
315(4)		VSC3110	POWER SHIELD PLATE (TOP)	1	
316(4)		VSC2237	POWER SHIELD PLATE (BOTTOM)	1	
317(4)		VGH2721	POWER NAME PLATE	1	
318(4)		VMC0866	EARTH SPRING	1	
321(4)		VMP1734	SCREW STOPPER ANGLE	1	
322(4)		VMZ1950	BARRIER	1	<!>
323(4)		VMP3322	TOP HOLDER ANGLE (B)	1	
324(4)		VMP3356	TOP HOLDER ANGLE (C)	1	
325(4)		VKF1199	FRONT JACK COVER	1	
326(4)		VKU0302	BOTTOM PLATE	1	
327(4)		VHD0059	BOTTOM PLATE SCREW	6	
328(4)		VHD0168	CHASSIS SCREW	1	
329(4)		VHD0418	MAIN SCREW	1	
331(4)		VES0680	KEY BOARD PANEL UNIT	1	
332(4)		VMC0463	FRONT JACK EARTH PLATE	1	
333(4)		VGL0524	PANEL LIGHT	1	
334(4)		VYF1851	DOOR PANEL (1) UNIT	1	
336(4)		VMT0212	CUSHION RUBBER	2	
338(4)		VKA0122	RUBBER FOOT	2	
340(4)		VKA0137	LEG	2	
341(4)		VMP3438	FTZ ANGLE	2	
342(4)		VGQ2756	FTZ ANGLE HOLDER	2	
343(4)		VMZ2008	FTZ BARRIER	1	
344(4)		VJS3267A012W	BRIDGE CONNECTOR	1	P7506-P6501

❺ PACKING PARTS SECTION



5. PACKING PARTS SECTION

Note: 1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
400(5)		VQT4590	OPERATING INSTRUCTIONS	1	<!>
			(ENGLISH/GERMAN)		
400(5)		VQT4591	OPERATING INSTRUCTIONS	1	<!>
			(FRENCH/DUTCH)		
400(5)		VQT4592	OPERATING INSTRUCTIONS	1	<!>
			(ITALIAN)		
401(5)		VQC1859	PROGRAMME SHEET	1	
402(5)		VJA0710	DIN RF CABLE	1	
403(5)		VEQ1389	REMOTE CONTROLLER UNIT	1	
			(BUILD IN DIGITAL SCANNER)		
404(5)		VJA0231	AUDIO CABLE	1	
405(5)		VJA0665	AC CORD	1	<!>
408(5)		VPK0834	ACCESSORIES PACKING	1	
409(5)		VPN3396	CUSHION (R)	1	
410(5)		VPN3395	CUSHION (L)	1	
411(5)		VPG6386	PACKING	1	
412(5)		VKF1658	BATTERY COVER	1	
413(5)		VGQ2399	SENSOR CAP	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			SERVICING FIXTURES & TOOLS		
		VFJ8125H3F	VHS ALIGNMENT TAPE(PAL)	1	
		VFK0335	RETAINING RING REMOVER	1	
			(3mm/4mm)		
		VFK0387	TENSION POST ADJUSTMENT	1	
			PLATE		
		VFK0191	POST ADJUSTMENT PLATE	1	
		VFK0190	REEL TABLE HEIGHIT GAUGE	1	
		VFK0328	H-POSITION ADJUSTMENT	1	
			SCREWDRIVER		
		VFK0329	POST ADJUSTMENT SCREWDRIVER	1	
		VFK62	FAN TYPE TENSION GAUGE	1	
		VFK0326	HEX WRENCH SET	1	
		VFK0132	BACK TENSION METER	1	
		VFK0343	CHECK LIGHT	1	
		VFK0344	HEIGHIT ADJUSTMENT FIXTURE	1	
		VFK27	HEAD CLEANING STICK	1	
		MOR265	MORLYTONE GREASE	1	
		VFK0341	UPPER CYLINDER REMOVER	1	
		VFK0680	WHITE GREASE	1	

5-2. ELECTRICAL REPLACEMENT PARTS LIST

Note:1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS ,K=1,000 OHMS. All capacitors are in MICRO-FARADS(uf),P=uuF.
4. The P.C.Board units marked width'▮'show below the main assembled parts.
5. Printed circuit board assembly with mark(NLA) is no longer available after discontinuation of the product.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP06795B	MAIN C.B.A.	1	(NLA) INCLUDING THE INPUT/ OUTPUT PACK C.B.A. (VEP03912A), S-VHS P.B. PACK C.B.A.(VEP03920A), LUMINANCE & CHROMINANCE PACK C.B.A.(VEP03928A), Hi-Fi AUDIO PACK C.B.A.(VEP04361B), SUB SERVO PACK C.B.A.(VEP06796B), VPS PACK C.B.A. (VEP07575A), TV DEMODULATOR PACK C.B.A.(VEP07643E), DECODER PACK C.B.A. (VEP07671C).
		VEP03912A	INPUT/OUTPUT PACK C.B.A.	1	(NLA) INCLUDED IN MAIN C.B.A.(VEP06795B).
		VEP03920A	S-VHS P.B. PACK C.B.A.	1	(NLA) INCLUDED IN MAIN C.B.A.(VEP06795B).
		VEP03928A	LUMINANCE & CHROMINANCE PACK C.B.A.	1	(NLA) INCLUDED IN MAIN C.B.A.(VEP06795B).
		VEP04361B	Hi-Fi AUDIO PACK C.B.A.	1	(NLA) INCLUDED IN MAIN C.B.A.(VEP06795B).
		VEP06796B	SUB SERVO PACK C.B.A.	1	(NLA) INCLUDED IN MAIN C.B.A.(VEP06795B).
		VEP07575A	VPS PACK C.B.A.	1	(NLA) INCLUDED IN MAIN C.B.A.(VEP06795B).
		VEP07643E	TV DOMODULATOR PACK C.B.A.	1	(NLA) INCLUDED IN MAIN C.B.A.(VEP06795B).
		VEP07671C	DECODER PACK C.B.A.	1	(NLA) INCLUDED IN MAIN C.B.A.(VEP06795B).
		VEP05178A	HEAD AMP C.B.A.	1	(NLA)
		VEP07674B	TIMER C.B.A.	1	(NLA)
		VEP00S02B	VR C.B.A.	1	(NLA)
		VEP00S03A	HEADPHONE & MIC JACK C.B.A.	1	(NLA)
		VEP00S04A	FRONT INPUT C.B.A.	1	(NLA)
		VEP00S33B	JOG SHUTTLE C.B.A.	1	(NLA)
		VEP01487A	POWER C.B.A.	1	(NLA)<!>
		VEX0117	CYLINDER DRIVE C.B.A.	1	(NLA)
		VXA3825	MECHANISM CONNECTION C.B.A.	1	(NLA)
		VEP00K88C	FE HEAD C.B.A.	1	(NLA)
		VEP00P61A	REV MOTOR CONNECTION C.B.A.	1	(NLA)
		VEK3578	PHOTO Tr. (S) C.B.A.	1	(NLA)
		-------	PHOTO Tr. (T) C.B.A.	1	(NLA) INCLUDED IN SLIDE SW UNIT.(VXA4642)
		ENC17984	RF CONVERTER	1	<!>
		ENV57884H6	TUNER	1	<!>
F1101		XBA2C16TB0	FUSE	1	<!>
	▮	VEP06795B	MAIN C.B.A.		(NLA)
			CAPACITORS		
C301		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C302		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C303		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C304,05		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	2	
C306		ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C307		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C308		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C309		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C310		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C312		ECUM1H561JCN	C.CAPACITOR 50V 560P	1	
C313		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C314		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C315		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C316		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C317		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C318		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C319		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C320,21		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C322		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C323		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C324		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C325		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C701		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C702		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C703		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C707		ECEA1HK0R1	E.CAPACITOR 50V 0.1U	1	
C708		ECEA1CKS100	E.CAPACITOR 16V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C717-20		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C721		ECEA1HKR27K	E.CAPACITOR 50V 0.27U	1	
C722		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C723		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C725		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C727		ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1	
C728		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C730		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C731		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C734		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C739		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C740		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C741		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C742		ECUM1H030CCN	C.CAPACITOR CH 50V 3P	1	
C743		ECUM1H270RSN	C.CAPACITOR CH 50V 27P	1	
C744		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C745		ECUM1H680JPN	C.CAPACITOR CH 50V 68P	1	
C746		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C748		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C781		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C782		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C790		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C801,02		ECEA0JK101	E.CAPACITOR 6.3V 100U	2	
C803		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C804		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C805		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C806		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C807		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C808-10		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C811		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C812		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C813		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C814		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C815		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C816,17		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C819-22		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C823		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C824		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C825		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C826		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C827		ECEA1HK0R1	E.CAPACITOR 50V 0.1U	1	
C828		ECQB1H332JH	P.CAPACITOR 50V 0.27U	1	
C829		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C830		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C831		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C832		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C834,35		ECUM1H121JCN	C.CAPACITOR CH 50V 120P	2	
C836,37		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	2	
C838		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C839		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C840		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C841		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C842		ECUM1H123KBN	C.CAPACITOR 50V 0.012U	1	
C843,44		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C1002,03		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C1004		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1006		ECEA1EK470	E.CAPACITOR 25V 47U	1	
C1007		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C1008		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C1009		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C1010		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C1011		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C1701		ECKD2H471KB	E.CAPACITOR 500V 470P	1	
C1702		ECA1CM101	E.CAPACITOR 16V 100U	1	
C1703		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1704		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1705		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C1706		ECEA1VU100	E.CAPACITOR 35V 10U	1	
C1707		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C1708		ECA1CM221	E.CAPACITOR 16V 220U	1	
C2001		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2002		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2003		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C2004		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2005		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2006		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C2007		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2008		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2009		VCYE1C104MR1	S.CAPACITOR 16V 0.1U	1	
C2010		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2011		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2012		ECQB1H222KH	P.CAPACITOR 50V 2200P	1	
C2013		ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	1	
C2014		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2015		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2016		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2017		ECQV1H184JZ	P.CAPACITOR 50V 0.18U	1	
C2018		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2019		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2020		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2021		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C2022		ECUM1E223KBN	C.CAPACITOR CH 25V 0.022U	1	
C2023		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C2024		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2025		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2026		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C2029		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2501		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2502		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2503,04		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C2505		ECEA1CU470	E.CAPACITOR 16V 47U	1	
C2506-09		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2510-12		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2513,14		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C2515		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2516		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2517		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C2518		ECEA1HKNR47	E.CAPACITOR 50V 0.47U	1	
C2519		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C2520		ECEA1HKNR47	E.CAPACITOR 50V 0.47U	1	
C2521		ECA1EM470	E.CAPACITOR 25V 47U	1	
C2522		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C2523		ECUM1E223KBN	C.CAPACITOR CH 25V 0.022U	1	
C2524,25		ECA1CM221	E.CAPACITOR 16V 220U	2	
C2526		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2527		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C2528		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C2529		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C2531		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C3001		ECA0JM471	E.CAPACITOR 6.3V 470U	1	
C3003		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3005		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3009		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3010		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C3011		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3012		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3013		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C3014		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3015		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3016		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3018		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C3019		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3020		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3021		ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C3022		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3023		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C3024		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3026		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3027		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
C3028		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C3029		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3031		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C3032		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3033		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C3034		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C3035		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C3036		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C3037,38		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	2	
C3050		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3901,02		ECEA0JK101	E.CAPACITOR 6.3V 100U	2	
C3903		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3904		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C3905		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3906,07		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C3908,09		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	2	
C3910		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3911,12		ECEA0JK101	E.CAPACITOR 6.3V 100U	2	
C3913		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C3914		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3915-17		ECEA0JK101	E.CAPACITOR 6.3V 100U	3	
C4001		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C4002,03		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4005		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4006		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C4007		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4008		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4009		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4010		ECQP1222JZ	P.CAPACITOR 0.0022U	1	
C4011		ECCD2H181J	C.CAPACITOR 500V 180P	1	
C4013,14		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C4015		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4016		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C4017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4018		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4019		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4020		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4021		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C4502		ECUM1C104ZFN	C.CAPACITOR CH 16V 0.1U	1	
C4503		ECUX1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C4504,05		ECEA1CPZ470	E.CAPACITOR 16V 47U	2	
C4506		VCEA1CAH100	E.CAPACITOR 16V 10U	1	
C4507		ECQB1H223JA	P.CAPACITOR 50V 0.022U	1	
C4508		ECEA1EBZ4R7	E.CAPACITOR 25V 4.7U	1	
C4509		ECEA1APZ470	E.CAPACITOR 10V 47U	1	
C4510		ECQB1H103JA	P.CAPACITOR 50V 0.01U	1	
C4511		ECQB1H332JA	P.CAPACITOR 50V 3300P	1	
C4512		ECUX1H561JV	C.CAPACITOR CH 50V 560P	1	
C4513		ECUM1H681JN	C.CAPACITOR CH 50V 680P	1	
C4514		ECUM1H561JN	C.CAPACITOR CH 50V 560P	1	
C4515		VCEA1EAH4R7	E.CAPACITOR 25V 4.7U	1	
C4517		ECEA1APZ101	E.CAPACITOR 10V 100U	1	
C4518		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C4521		ECUM1C473KBV	C.CAPACITOR CH 16V 0.047U	1	
C4522		VCEA1HAH3R3	E.CAPACITOR 50V 3.3U	1	
C4528		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C4530		ECEA0JPK470	E.CAPACITOR 6.3V 47U	1	
C4533		ECEA1CPZ330	E.CAPACITOR 16V 33U	1	
C4537		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C4538		ECEA1HUR47	E.CAPACITOR 50V 0.47U	1	
C4539		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C4541		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C4545		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4552		ECUM1C104ZFN	C.CAPACITOR CH 16V 0.1U	1	
C4556		VCEA1CAH100	E.CAPACITOR 16V 10U	1	
C4557		ECQB1H223JA	P.CAPACITOR 50V 0.022U	1	
C4558		ECEA1EBZ4R7	E.CAPACITOR 25V 4.7U	1	
C4559		ECEA1APZ470	E.CAPACITOR 10V 47U	1	
C4560		ECQB1H103JA	P.CAPACITOR 50V 0.01U	1	
C4561		ECQB1H332JA	P.CAPACITOR 50V 3300P	1	
C4562		ECUM1H561JN	C.CAPACITOR CH 50V 560P	1	
C4563		ECUM1H681JN	C.CAPACITOR CH 50V 680P	1	
C4564		ECUM1H561JN	C.CAPACITOR CH 50V 560P	1	
C4565		VCEA1EAH4R7	E.CAPACITOR 25V 4.7U	1	
C4567		ECEA1APZ101	E.CAPACITOR 10V 100U	1	
C4568		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C4572		VCEA1HAH3R3	E.CAPACITOR 50V 3.3U	1	
C4576		ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C4583		ECEA1CPZ330	E.CAPACITOR 16V 33U	1	
C4585,86		ECEA1APZ101	E.CAPACITOR 10V 100U	2	
C4591		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C4592		ECUX1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C4604		ECUM1H182JN	C.CAPACITOR CH 50V 1800P	1	
C4606		VCEA0JAC470	E.CAPACITOR 6.3V 47U	1	
C4611		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C4613		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C4616		ECUX1H102ZFV	C.CAPACITOR CH 50V 1000P	1	
C4617		ECEA10M22	E.CAPACITOR 10V 22U	1	
C4618		ECQB1H822JH	P.CAPACITOR 50V 8200P	1	
C4619		ECEA1APB100	E.CAPACITOR 10V 10U	1	
C4621		ECEA0JPK101	E.CAPACITOR 6.3V 100U	1	
C4629		ECQB1H103JZ	P.CAPACITOR 50V 0.01U	1	
C4636		ECUM1H471JN	C.CAPACITOR CH 50V 470P	1	
C4638		ECQB1H822JH	P.CAPACITOR 50V 8200P	1	
C4651		ECQB1H333JA	P.CAPACITOR 50V 0.033U	1	
C4652,53		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C4901-04		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	4	
C4908-10		VCEA1CAD100	E.CAPACITOR 16V 10U	3	
C4911,12		VCEA0JAC101	E.CAPACITOR 6.3V 100U	2	
C4913		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4914		ECQB1H332JH	P.CAPACITOR 50V 0.27U	1	
C4915		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4916		ECQB1H332JH	P.CAPACITOR 50V 0.27U	1	
C4917		VCEA1CAD100	E.CAPACITOR 16V 10U	1	
C4918		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4919		ECQB1H332JH	P.CAPACITOR 50V 0.27U	1	
C4920		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4921		ECQB1H332JH	P.CAPACITOR 50V 0.27U	1	
C4922		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4923,24		ECQB1H332JH	P.CAPACITOR 50V 0.27U	2	
C4925		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C5005		ECEA1EK3R3	E.CAPACITOR 25V 3.3U	1	
C5006		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C5007-09		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	3	
C5012,13		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C5014		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C5015,16		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C6001		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C6002		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C6003,04		ECEA0JK470	E.CAPACITOR 6.3V 47U	2	
C6005		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C6006		ECQB1H392J	P.CAPACITOR 50V 3900P	1	
C6007		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6010,11		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	2	
C6014		ECA0JM331	E.CAPACITOR 6.3V 330U	1	
C6015		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6016		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6017		ECA1CM222	E.CAPACITOR 16V 2200U	1	
C6018		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6019		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C6021		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C6022,23		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	2	
C6024-26		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C6027		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C6028		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C6029		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6104		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C6105		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C6302		EECS5R5T224N	E.CAPACITOR 5.5V 0.22U	1	
C7302		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C7303		ECQV1H393JZ	P.CAPACITOR 50V 0.039U	1	
C7304		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C7305		ECQV1H473JZ	P.CAPACITOR 50V 0.047U	1	
C7306		ECQB1H102KZ	P.CAPACITOR 50V 100CP	1	
C7307		ECQB1H822KZ	P.CAPACITOR 50V 8200P	1	
C7308		ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C7309		ECQB1H152JH	P.CAPACITOR 50V 1500P	1	
C7310		ECEA16Mi0	E.CAPACITOR 16V	1	
C7311		ECEA50MR47	E.CAPACITOR	1	
C7312		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C7313		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7314		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C7315		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7316		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C7317		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C7318		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7319		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C7320,21		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C7323,24		ECQV1H393JZ	P.CAPACITOR 50V 0.039U	2	
C7331		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C7332,33		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	2	
C7334		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7335		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C7336		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7337		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C7339		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7340		ECUM1H390JPN	C.CAPACITOR CH 50V 39P	1	
C7341		ECUM1H070DCN	C.CAPACITOR CH 50V 7P	1	
C7342		ECQV1H823JZ	P.CAPACITOR 50V 0.082U	1	
C7343		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7345		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7346		ECUM1H390JPN	C.CAPACITOR CH 50V 39P	1	
C7347		ECUM1H070DCN	C.CAPACITOR CH 50V 7P	1	
C7348		ECQV1H393JZ	P.CAPACITOR 50V 0.039U	1	
C7349,50		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	2	
C7351,52		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7353		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C7401		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7402		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7405,06		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7407		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7408		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7412		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7413		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7651		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C7653		ECQB1H332JH	P.CAPACITOR 50V 0.27U	1	
C7668		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7685		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C7801		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7815		VCYE1C104MR1	S.CAPACITOR 16V 0.1U	1	
C7816		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C7821		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C7822		ECQB1H333JH	P.CAPACITOR 50V 0.033U	1	
C7823		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C7851		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7852		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C7853,54		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C7855,56		ECEA1HK010	E.CAPACITOR 50V 1U	2	
C7860		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
			DIODES		
D301		1SS254	DIODE	1	
D303		MA723	DIODE	1	
D710		MA3100L	DIODE	1	
D801-03		1SS254	DIODE	3	
D805,06		1SS254	DIODE	2	
D1005		1SS254	DIODE	1	
D1006		SV03YS	DIODE	1	
D1007		AK04	DIODE	1	
D1701		SB05-05CP	DIODE	1	
D1702		MA4300H	DIODE	1	
D1703		MA185	DIODE	1	
D2003		1SS254	DIODE	1	
D2503-10		1SS254	DIODE	8	
D2511		AK04	DIODE	1	
D2512		MA723VT	DIODE	1	
D2513		1SS254	DIODE	1	
D3003		1SS254	DIODE	1	
D3004		M1MA151WA	DIODE	1	
D3005		1SS254	DIODE	1	
D3901		MA4056M	DIODE	1	
D3902		1SS254	DIODE	1	
D3903		M1MA151WK	DIODE	1	
D3904,05		MA151K	DIODE	2	
D4001		M1MA151WK	DIODE	1	
D4002-04		1SS254	DIODE	3	
D4501,02		MA151K	DIODE	2	
D4503		MA151K	DIODE	1	
D4504		MA151K	DIODE	1	
D4602		MA151K	DIODE	1	
D6002-04		MA723VT	DIODE	3	
D6007		ERA15-01	DIODE	1	
D6008		AK04	DIODE	1	
D6009-11		1SS254	DIODE	3	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D6012		M1MA151WK	DIODE	1	
D6101-10		1SS254	DIODE	10	
D6112		1SS254	DIODE	1	
D6113,14		SV03YS	DIODE	2	
D7303		MA28WA	DIODE	1	
D7304		MA3100L	DIODE	1	
D7401		MA723VT	DIODE	1	
D7402		1SS254	DIODE	1	
D7406,07		1SS254	DIODE	2	
D7408		M1MA151WK	DIODE	1	
D7672,73		MA3150-H	DIODE	2	
D7851		1SS254	DIODE	1	
			DELAYS		
DL801		EFDUN124A13N	DELAY	1	
DL802		VLD0198	DELAY	1	
			FILTERS		
FL3901		VLF0413	FILTER	1	
FL4501		VLF0947	FILTER	1	
			INTEGRATED CIRCUITS		
IC301		MSM7403MS	IC	1	
IC302		VEFH14D	IC	1	
IC303		UPC78L05J	IC	1	
IC701		M51366SP	IC	1	
IC801		M52352FP	IC	1	
IC2001		AN3727S	IC	1	
IC2002		UPC358G2	IC	1	
IC2501		BA6435S	IC	1	
IC2502		UPC358G2	IC	1	
IC2503		SI-3090CA	IC	1	
IC2504		TPIC0130N	IC	1	
IC3901		M52474P	IC	1	
IC3902		BA7004	IC	1	
IC4001		RC4565DD	IC	1	
IC4501		BH7770KS	IC	1	
IC4601		BA7755AF	IC	1	
IC4901		LA7155M	IC	1	
IC6001		MN67431VREG	IC	1	
IC6002		MC14519BF	IC	1	
IC6003		BU5863F	IC	1	
IC6004		MN1280S	IC	1	
IC7301		TDA3803A	IC	1	
IC7302		TA8721SN	IC	1	
IC7401		M66006FP	IC	1	
IC7851		MN158413VSSY	IC	1	
IC7852		MN1280S	IC	1	
IC7853		SDA5642	IC	1	
			CONNECTORS		
JK3901,02		VJS1469	CONNECTOR (FEMALE)	2	
			COILS		
L302,03		VLQ0188J390	COIL 39UH	2	
L304,05		ELESQ101KA	COIL 100UH	2	
L306		ELESP560KA	COIL 56UH	1	
L307,08		VLP0099	COIL	2	
L701		ELESP680KA	COIL 68UH	1	
L711		ELQTR22XB	COIL 0.22UH	1	
L714		VLQ0305J1R2	COIL 1.2UH	1	
L715		VLQ0213K680	COIL 68UH	1	
L716		ELESP560KA	COIL 56UH	1	
L717,18		ELESP680KA	COIL 68UH	2	
L719		ELESP120KA	COIL 12UH	1	
L781		ELESP680KA	COIL 68UH	1	
L801		ELESQ101KA	COIL 100UH	1	
L802		ELESP270KA	COIL 27UH	1	
L803		ELESP560JA	COIL 56UH	1	
L804		ELESQ101KA	COIL 100UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L805-08		VLQ0188J150	COIL 15UH	4	
L809		ELESQ101KA	COIL 100UH	1	
L810		VLQ0188J181	COIL 180UH	1	
L812,13		ELESQ101KA	COIL 100UH	2	
L1001		VLP0083	FILTER	1	
L1701		ELESQ101KA	COIL 100UH	1	
L2001		VLQEL05F101K	COIL 100UH	1	
L2002		VLP0085	FILTER	1	
L2003		VLQEL05F101K	COIL 100UH	1	
L2004		VLP0099	COIL	1	
L2005		VLQ0531	COIL	1	
L2501		ELESP102KA	COIL 1000UH	1	
L2502,03		ELESQ101KA	COIL 100UH	2	
L2504		ERDS2T0	C.RESISTOR 1/4W 0	1	
L2505		VLQ0558K331	COIL	1	
L3001		ELESP1R0KA	COIL 1UH	1	
L3002		VLQEL05F101K	COIL 100UH	1	
L3004		ELESQ151JA	COIL 150UH	1	
L3005		ELESQ820JA	COIL 82UH	1	
L3010		ELESP270JA	COIL 27UH	1	
L3011		VLQEL05F101K	COIL 100UH	1	
L3012		ELESP6R8JA	COIL 6.8UH	1	
L3014		ELESP5R6JA	COIL 5.6UH	1	
L3015		ELESQ101JA	COIL 100UH	1	
L3016		ELESQ120JA	COIL 12UH	1	
L3017		VLQEL05F101K	COIL 100UH	1	
L3901,02		ELESQ101KA	COIL 100UH	2	
L3903		VLQ0188K330	COIL 33UH	1	
L4001		ELESP471KA	COIL 470UH	1	
L4501,02		ELESQ101KA	COIL 100UH	2	
L4601		VLQEL07F153J	COIL 15MH	1	
L4901		ELESP102KA	COIL 1000UH	1	
L4902,03		ELESQ101KA	COIL 100UH	2	
L4904-08		ELESP102KA	COIL 1000UH	5	
L4909,10		ELESQ101KA	COIL 100UH	2	
L5001		ELESQ101KA	COIL 100UH	1	
L5002		VLQ0188J270	COIL 27UH	1	
L5003		ELESP270JA	COIL 27UH	1	
L5004		ELESQ150JA	COIL 15UH	1	
L6001		VLP0074	COIL	1	
L7301		ELESP102KA	COIL 1000UH	1	
L7401-03		VLQEL05F101K	COIL 100UH	3	
L7404		ELESP1R0KA	COIL 1UH	1	
L7405		VLQEL05F101K	COIL 100UH	1	
L7406		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
			CONNECTORS		
P1		VJS1737	CONNECTOR (FEMALE)	1	
P001		VJS1738	CONNECTOR (FEMALE)	1	
P501		VJS0171R	CONNECTOR (FEMALE)	1	
P551		VJS1741	CONNECTOR (FEMALE)	1	
P1003		VJP1238T	CONNECTOR (MALE) 11P	1	
P1003		VJS1238T	CONNECTOR (FEMALE)	1	
P1101		VJS1237T	CONNECTOR (FEMALE)	1	
P1523		VJS1141	CONNECTOR (FEMALE)	1	
P2001		VJS1663	CONNECTOR (FEMALE)	1	
P2002		VJP1232T	CONNECTOR (MALE) 5P	1	
P2002		VJS1738	CONNECTOR (FEMALE)	1	
P2501		VJP1231T	CONNECTOR (MALE) 4P	1	
P2501		VJS1737	CONNECTOR (FEMALE)	1	
P3001		VJP1238T	CONNECTOR (MALE) 11P	1	
P3001		VJS1238T	CONNECTOR (FEMALE)	1	
P3901		VJP1231T	CONNECTOR (MALE) 4P	1	
P3901		VJP1246T	CONNECTOR (MALE) 6P	1	
P3903		VJS1233T	CONNECTOR (FEMALE)	1	
P4001		VJP1233T	CONNECTOR (MALE) 6P	1	
P4002		VJP1235T	CONNECTOR (MALE) 8P	1	
P4002		VJS1741	CONNECTOR (FEMALE)	1	
P4003		VJP1229T	CONNECTOR (MALE) 2P	1	
P4003		VJS1229T	CONNECTOR (FEMALE)	1	
P4004		VJP1239T	CONNECTOR (MALE) 12P	1	
P4004		VJS1745	CONNECTOR (FEMALE)	1	
P4801		VJS1233T	CONNECTOR (FEMALE)	1	
P4802		VJS1231T	CONNECTOR (FEMALE)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P6001		VJS1663	CONNECTOR (FEMALE)	1	
P6004		VJS2571A004	CONNECTOR (FEMALE)	1	
P6005		VJS3193A020A	CONNECTOR (FEMALE)	1	
P6006		VJS3193A018A	CONNECTOR (FEMALE)	1	
P6511		VJS1745	CONNECTOR (FEMALE)	1	
P6902		VJP1230T	CONNECTOR (MALE) 3P	1	
P6902		VJS1230T	CONNECTOR (FEMALE)	1	
PK301		VJR0163	PACK PIN	1	
PK302		VJR0130	PACK PIN	1	
PK303		VJR0161	PACK PIN	1	
PP804		VJP3043A005W	CONNECTOR (MALE)	1	
PP2501		VJP3043G010W	CONNECTOR (MALE)	1	
PP2502		VJP3043G008W	CONNECTOR (MALE)	1	
PP2503		VJP3043G012W	CONNECTOR (MALE)	1	
PP3001		VJP3044G009W	CONNECTOR (MALE)	1	
PP3002		VJP3044G012W	CONNECTOR (MALE)	1	
PP3003		VJP3044G007W	CONNECTOR (MALE)	1	
PP3901		VJP3042A016W	CONNECTOR (MALE)	1	
PP3902		VJP3042G017W	CONNECTOR (MALE)	1	
PP7401-03		VJP3043A005W	CONNECTOR (MALE)	3	
PP7404		VJP3043A006W	CONNECTOR (MALE)	1	
PP7705		VJP3043A004W	CONNECTOR (MALE)	1	
PS701-03		VJS3043B005W	CONNECTOR (FEMALE)	3	
PS704		VJS3043B006W	CONNECTOR (FEMALE)	1	
PS2501		VJS3043B010W	CONNECTOR (FEMALE)	1	
PS2502		VJS3043F008W	CONNECTOR (FEMALE)	1	
PS2503		VJS3043F012W	CONNECTOR (FEMALE)	1	
PS3951		VJS3042B016W	CONNECTOR (FEMALE)	1	
PS3952		VJS3042F017W	CONNECTOR (FEMALE)	1	
PS4001		VJP3186A018	CONNECTOR (MALE)	1	
PS4001		VJS3186B018	CONNECTOR (FEMALE)	1	
PS4002		VJP3186A018	CONNECTOR (MALE)	1	
PS4002		VJS3186B018	CONNECTOR (FEMALE)	1	
PS4003		VJP3186A018	CONNECTOR (MALE)	1	
PS4003		VJS3186B018	CONNECTOR (FEMALE)	1	
PS5001		VJS3043B005W	CONNECTOR (FEMALE)	1	
PS7301,02		VJR0477	PACK PIN	2	
			TRANSISTORS		
Q301		MSC2295	TRANSISTOR	1	
Q302		MSB709	TRANSISTOR	1	
Q303		MSC2295	TRANSISTOR	1	
Q304		MSB709	TRANSISTOR	1	
Q703		MSD601-S	TRANSISTOR	1	
Q712		2SD1992	TRANSISTOR	1	
Q771		MSD601-S	TRANSISTOR	1	
Q801		MSD601	TRANSISTOR	1	
Q802		MSC2295	TRANSISTOR	1	
Q803-05		MSD601	TRANSISTOR	3	
Q1001		2SD1996-S	TRANSISTOR	1	
Q1701		2SD973B-R	TRANSISTOR	1	
Q2001		2SD1915F	TRANSISTOR	1	
Q2501		2SB772	TRANSISTOR	1	
Q3001		2SB709	TRANSISTOR CHIP	1	
Q3004,05		2SD601	TRANSISTOR CHIP	2	
Q3006		2SC2295	TRANSISTOR	1	
Q3007		MSB709	TRANSISTOR	1	
Q3008		MSC2295	TRANSISTOR	1	
Q3009		2SC2295	TRANSISTOR	1	
Q3010		MSD601	TRANSISTOR	1	
Q3014		2SB709	TRANSISTOR CHIP	1	
Q3015		2SD1938	TRANSISTOR	1	
Q3901		MSD601	TRANSISTOR	1	
Q3902		2SB1320	TRANSISTOR	1	
Q3903		MSD601	TRANSISTOR	1	
Q3904		MSB709	TRANSISTOR	1	
Q3905		MSD1328	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q3906		MSB709	TRANSISTOR	1	
Q3907		MSD601	TRANSISTOR	1	
Q4002		2SB710-R	TRANSISTOR	1	
Q4003		MSB710-R	TRANSISTOR	1	
Q4004		2SB1378	TRANSISTOR	1	
Q4005		MSB710-R	TRANSISTOR	1	
Q4006		2SD602A	TRANSISTOR	1	
Q4501		2SD655	TRANSISTOR	1	
Q4551		2SB561	TRANSISTOR	1	
Q4601		MSD1328	TRANSISTOR	1	
Q5001		MSB709	TRANSISTOR	1	
Q5002		MSD601	TRANSISTOR	1	
Q5003		2SA1022	TRANSISTOR CHIP	1	
Q5005		XN1501	TWIN TRANSISTOR	1	
Q5006		MSB709	TRANSISTOR	1	
Q5007		MSC2295	TRANSISTOR	1	
Q5008		MSB709	TRANSISTOR	1	
Q5009-13		MSC2295	TRANSISTOR	5	
Q6001		2SD655	TRANSISTOR	1	
Q6003		2SD893	TRANSISTOR	1	
Q6004,05		2SD1994-S	TRANSISTOR	2	
Q6006		MSD602	TRANSISTOR	1	
Q6101		MSD601	TRANSISTOR	1	
Q6102		MSB709	TRANSISTOR	1	
Q6105		MSD601	TRANSISTOR	1	
Q7301		MSD601-ST	TRANSISTOR	1	
Q7304,05		MSD601	TRANSISTOR	2	
Q7306		2SC2404-C	TRANSISTOR CHIP	1	
Q7307		2SD1328	TRANSISTOR	1	
Q7401		2SB710	TRANSISTOR CHIP	1	
			COMBINATION PARTS		
QR301		DTC363EK	TRANSISTOR-RESISTOR	1	
QR303		MRN1404	TRANSISTOR	1	
QR304		MRN1403	TRANSISTOR	1	
QR305		MRN1404	TRANSISTOR	1	
QR306		IMH5	TRANSISTOR-RESISTOR	1	
QR701,02		MRN1404	TRANSISTOR	2	
QR711,12		MRN1403	TRANSISTOR	2	
QR801		MRN2404	TRANSISTOR	1	
QR803		MRN1404	TRANSISTOR	1	
QR805		MRN1403	TRANSISTOR	1	
QR807		MRN1403	TRANSISTOR	1	
QR1001,02		MRN1402	TRANSISTOR	2	
QR2001,02		MRN1404	TRANSISTOR	2	
QR2502,03		MRN1403	TRANSISTOR	2	
QR2504		MRN2404	TRANSISTOR	1	
QR3002,03		MRN2402	TRANSISTOR	2	
QR3006		MRN1403	TRANSISTOR	1	
QR3007		DTC363EK	COMBI.TR-R	1	
QR3008		DTC363EK	TRANSISTOR-RESISTOR	1	
QR3010		MRN1404	TRANSISTOR	1	
QR3902		MRN1403	TRANSISTOR	1	
QR3903		MRN1402	TRANSISTOR	1	
QR4001-06		MRN1404	TRANSISTOR	6	
QR4007		MRN1403	TRANSISTOR	1	
QR4010		MRN1404	TRANSISTOR	1	
QR4012		MRN1402	TRANSISTOR	1	
QR4013,14		MRN1404	TRANSISTOR	2	
QR4508,09		MRN2404	TRANSISTOR	2	
QR4510		MRN1403	TRANSISTOR	1	
QR4602		MRN2402	TRANSISTOR	1	
QR4603		MRN1404	TRANSISTOR	1	
QR6001,02		MRN2402	TRANSISTOR	2	
QR6003		MRN1402	TRANSISTOR	1	
QR6004		UN211H	IC	1	
QR6005		MRN2404	TRANSISTOR	1	
QR6006		UN211H	IC	1	
QR6007		MRN2404	TRANSISTOR	1	
QR6008		MRN2402	TRANSISTOR	1	
QR6009,10		MRN1404	TRANSISTOR	2	
QR6101		MRN1404	TRANSISTOR	1	
QR6102,03		MRN1402	TRANSISTOR	2	
QR6104		MRN1407	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR6105		MRN1402	TRANSISTOR	1	
QR6106		MRN1404	TRANSISTOR	1	
QR6107		MRN2404	TRANSISTOR	1	
QR6108		MRN1404	TRANSISTOR	1	
QR6109		MRN2402	TRANSISTOR	1	
QR7301,02		MRN1404	TRANSISTOR	2	
QR7312-14		MRN1402	TRANSISTOR	3	
QR7315,16		MRN1404	TRANSISTOR	2	
QR7401		UN2217	TRANSISTOR-RESISTOR	1	
QR7801		MRN2402	TRANSISTOR	1	
QR7802		MRN1404	TRANSISTOR	1	
QR7851		MRN1402	TRANSISTOR	1	
QR7852		MRN1404	TRANSISTOR	1	
			RESISTORS		
R301		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R302		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R303,04		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	2	
R305		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R306		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R307		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R308		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R309		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R310		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R311		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R313-15		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	3	
R316,17		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R318		ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R319		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R320		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R321		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R322		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R323		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R324		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R325		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R716		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R717		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R718		ERJ6GEYJ754	M.RESISTOR CH 1/10W 750K	1	
R719,20		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	2	
R721		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R722		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R723		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R724		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R725		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R726		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R727		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R728		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R737		ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R738		ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R740		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R741		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R743		ERJ6GEYJ470	M.RESISTOR CH 1/10W 47	1	
R744		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R745		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R746		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R747		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R750		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R759		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R772		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R773		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R774		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R781		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R782		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R792		ERDS2TJ120	C.RESISTOR 1/4W 12	1	
R801		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R802		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R803		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R804		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R805		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R806		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R807,08		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	2	
R809,10		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R811		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R812		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R813,14		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	2	
R815		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R816		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R817		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R818,19		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R820		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R821		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R823		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R824		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R827		ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R828		ERJ6GMYJ204	M.RESISTOR CH 1/10W 200K	1	
R829		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R830		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R831		ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R832,33		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R834		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R835,36		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R837		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R838		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R839		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R840		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R841		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R842		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R843		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R845		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R846		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R847,48		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R1002		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R1003		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R1004		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R1701		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R1702		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R2001,02		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2003		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2005,06		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2007		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2008,09		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	2	
R2010		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2011		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2012		ERJ6GMYG392	M.RESISTOR CH 1/10W 3.9K	1	
R2013		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2014		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2015		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2016		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2017		ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R2018		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R2019		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2501		ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2502		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R2503		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2504		ERJ6GMYG512	M.RESISTOR CH 1/10W 5.1K	1	
R2505		ERJ6GMYG513	M.RESISTOR CH 1/10W 51K	1	
R2506		ERJ6GMYJ824	M.RESISTOR CH 1/10W 820K	1	
R2507		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2508-10		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2511,12		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2513		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2514		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2515		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2516		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2517		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2520		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R2521		ERDS1TJ681	C.RESISTOR 1/2W 680	1	
R2522		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2523		ERJ6GMYG123	M.RESISTOR CH 1/10W 12K	1	
R2524		ERJ6GMYG393	M.RESISTOR CH 1/10W 39K	1	
R2525		ERJ6GMYG124	M.RESISTOR CH 1/10W 120K	1	
R2526		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2528		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2529		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R2530		ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	1	
R2531		ERJ6GMYG392	M.RESISTOR CH 1/10W 3.9K	1	
R2532		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2534		ERSF30JR90		1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2535		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2537		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2538		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2539		ERJ6GMYJ622	M.RESISTOR CH 1/10W 6.2K	1	
R2540		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2541		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2542		ERX12SJR47	M.RESISTOR 1/2W 0.47	1	
R2547		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3002		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3003		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R3008		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3009		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R3010		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3012		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3013		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3014		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R3015		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3016,17		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	2	
R3018		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3020		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3022		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3023		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3024,25		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	2	
R3026		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R3027		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R3028		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3029		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R3030		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3032		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R3037,38		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	2	
R3039		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3041		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3042-44		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	3	
R3047		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R3049		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3050		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R3901-04		ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	4	
R3905		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R3906		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R3907		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3908-10		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	3	
R3911,12		ERJ6GEYJ151	M.RESISTOR CH 1/10W 150	2	
R3913		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3914		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R3915		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3916		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3917		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R3918		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3919		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3920		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R3921		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R3922		ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1	
R3923,24		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R3925		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3926		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3927,28		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R3929		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3930,31		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R3933		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3934		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3935-37		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	3	
R4001		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R4003		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4004		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4005		ERDS2TJ680	C.RESISTOR 1/4W 68	1	
R4006,07		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R4008		ERDS2TJ680	C.RESISTOR 1/4W 68	1	
R4009		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R4010		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4011		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4012		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4013		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R4014		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4015		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4019		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4020,21		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	2	
R4022		ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R4024		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R4025,26		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4027		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R4028,29		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R4034		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R4035		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4036		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R4037-40		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	4	
R4041,42		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	2	
R4043		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4044		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4102		ERJ6GMYG303	M.RESISTOR CH 1/10W 30K	1	
R4103		ERJ6GMYG623	M.RESISTOR CH 1/10W 62K	1	
R4104		ERJ6GMYJ823	M.RESISTOR CH 1/10W 82K	1	
R4501,02		ERJ3GEYOROO	M.RESISTOR CH 1/16W 0	2	
R4503		VREOO71E36C	M.RESISTOR	1	
R4504,05		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	2	
R4506,07		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R4508		ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R4509		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4510		ERJ6GEYJ621	M.RESISTOR CH 1/10W 620	1	
R4511		ERJ6GEYG303	M.RESISTOR CH 1/10W 30K	1	
R4512		VREOO34E163	M.RESISTOR CH 1/10W 16K	1	
R4513		ERJ3GEYG103	M.RESISTOR CH 1/16W 10K	1	
R4514		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R4518,19		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	2	
R4522		ERJ6GEYJ225	M.RESISTOR CH 1/10W 2.2M	1	
R4527		VREOO34E333	M.RESISTOR CH 1/10W 33K	1	
R4528		VREOO34E153	M.RESISTOR CH 1/10W 15K	1	
R4529		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4530		ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R4534		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4535		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4539		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4540		ERJ3GEYOROO	M.RESISTOR CH 1/16W 0	1	
R4541		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R4542		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4543		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4551,52		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	2	
R4553		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R4554		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R4558		ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R4561		ERJ6GEYG303	M.RESISTOR CH 1/10W 30K	1	
R4562		VREOO34E10C	M.RESISTOR 1/10W	1	
R4563		ERJ3GEYG272	M.RESISTOR CH 1/16W 2.7K	1	
R4568		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R4569		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R4573		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R4577		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4578		VREOO34E473	M.RESISTOR CH 1/10W 47K	1	
R4581		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4583		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R4584		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R4585		ERJ3GEYOROO	M.RESISTOR CH 1/16W 0	1	
R4586		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R4587,88		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	2	
R4591		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4592		ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R4593		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4594		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4603		ERJ3GEYG183	M.RESISTOR CH 1/16W 18K	1	
R4606		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4610		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R4611,12		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	2	
R4613		ERJ6GEYJ394	M.RESISTOR CH 1/10W 390K	1	
R4615		ERJ6GEYJ133	M.RESISTOR CH 1/10W 13K	1	
R4616		ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R4638		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R4649		ERJ3GEYG470	M.RESISTOR 1/16W 47	1	
R4651		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4653		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R4654		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R4655		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4656		ERJ6GEYG243	M.RESISTOR CH 1/10W 24K	1	
R4657		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R4659		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R4666		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R4901		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R4902		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4903		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R4904		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4905		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R4906		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4907		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R4908		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4909,10		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	
R4911		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4912		ERJ6GEYG163	M.RESISTOR CH 1/10W 16K	1	
R4913,14		ERJ6GEYJ433	M.RESISTOR CH 1/10W 43K	2	
R4915		ERJ6GEYG163	M.RESISTOR CH 1/10W 16K	1	
R4916		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4917-20		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	4	
R4921		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R4922,23		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	2	
R4924		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R5003		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R5004		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R5005		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R5006		ERJ6GEYJ124	M.RESISTOR CH 1/10W 120K	1	
R5007		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R5012		ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R5013		ERJ6GEYG123	M.RESISTOR CH 1/10W 12K	1	
R5014		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R5016,17		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R5018		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R5019		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R5020		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R5021,22		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	2	
R5023		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R5025		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R5027		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R5028,29		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R5030		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R5031		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6001		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6002		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6003		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6004		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R6005		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6006,07		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6008-10		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	3	
R6011		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6012,13		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R6014-19		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	6	
R6021		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R6024		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6027		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R6028		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R6029		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R6030		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R6031		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R6032		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6033		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R6034		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R6035		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6036		ERJ6GMYJ201	M.RESISTOR CH 1/10W 200	1	
R6037		ERG3SJ220	M.RESISTOR 3W 22	1	
R6038		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6039		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6040		ERD2FCVG220	C.RESISTOR 2W 22	1	<!>
R6041		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R6043,44		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R6045		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R6046		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6047		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6048,49		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R6050,51		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R6052		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6053		ERJ6GMYJ184	M.RESISTOR CH 1/10W 180K	1	
R6054		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R6055		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R6057		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6058		ERJ6GMYJ131	M.RESISTOR CH 1/10W 130	1	
R6059		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6060		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6061		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R6101		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6102		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6103		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R6104,05		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R6106		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R6108,09		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R6110		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6111		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6112,13		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R6115		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6116		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R6117		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6118,19		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	2	
R6301		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7302		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R7303		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7304		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R7305		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R7306		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R7307		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7308		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R7309		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R7310		ERJ6GEYJ474	M.RESISTOR CH 1/10W 470K	1	
R7311		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7312		ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R7313		ERJ6GEYJ824	M.RESISTOR CH 1/10W 820K	1	
R7314,15		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	2	
R7316		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R7317		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R7318		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R7321		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7322		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7323		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7324,25		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	2	
R7329		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7330		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7334-37		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	4	
R7338		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7339		ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	1	
R7340		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R7341		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R7342		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7345		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7346		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7347		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R7348		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7349		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7351-53		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	3	
R7354,55		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R7402		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7403,04		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	2	
R7405		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7406		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7407		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7410		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7412		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7414,15		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7419-21		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	3	
R7422-24		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	3	
R7656		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7676		ERG1SJ152	M.RESISTOR 1W 1.5K	1	
R7801		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7802		ERJ6GEYJ824	M.RESISTOR CH 1/10W 820K	1	
R7803,04		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R7805		ERJ6GEYJ824	M.RESISTOR CH 1/10W 820K	1	
R7806		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7807		ERJ6GEYG512	M.RESISTOR CH 1/10W 5.1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7808		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R7821		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7822		ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R7851		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7860		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
			SWITCHES		
SW3901		VSS0225	SWITCH	1	
			TRANSFORMERS		
T703		EIV5EC013A	TRANSFORMER	1	
T704		EIV5EC006A1	TRANSFORMER	1	
T1701		VLT0683	TRANSFORMER	1	
T4001		EIQ7QF013Q	TRANSFORMER	1	
T7301		EIR7QG001B	IF TRANSFORMER	1	
T7302,03		EIL7QH012Q	TRANSFORMER	2	
T7304		EIS5EC007A	TRANSFORMER	1	
T7305		EIS5EC005A	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR301		EVMF6SA00B13	V.RESISTOR 1K	1	
VR701,02		EVTF6SA00B23	V.RESISTOR 2K	2	
VR741		EVNDXAA00B14	V.RESISTOR 10K	1	
VR801,02		EVMF6SA00B13	V.RESISTOR 1K	2	
VR803		EVMF6SA00B14	V.RESISTOR 10K	1	
VR2001		EVNDXAA00B54	V.RESISTOR 50K	1	
VR2006		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2011		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2018,19		EVNDXAA00B15	V.RESISTOR 100K	2	
VR3001		EVNDXAA00B23	V.RESISTOR 2K	1	
VR3012,13		EVNDXAA00B52	V.RESISTOR 500	2	
VR4001		EVNDXAA00B25	V.RESISTOR 200K	1	
VR4501		EVMFLSA00B53	V.RESISTOR	1	
VR4502		EVMF6SA00B24	V.RESISTOR 20K	1	
VR4507		EVMF6SA00B24	V.RESISTOR 20K	1	
VR4509		EVMFLSA00BY3	V.RESISTOR	1	
VR4512		EVNDXAA00B52	V.RESISTOR 500	1	
VR4550		EVMFLSA00BS3	V.RESISTOR	1	
VR4551,52		EVMF6SA00B55	V.RESISTOR	2	
VR7301		EVMF6SA00B14	V.RESISTOR 10K	1	
VR7326		EVMF6SA00B52	V.RESISTOR	1	
VR7328		EVMF6SA00B52	V.RESISTOR	1	
VR7340		EVNE4AA00B14	V.RESISTOR 10K	1	
VR7342		EVNE4AA00B53	V.RESISTOR 5K	1	
VR7344		EVNE4AA00B14	V.RESISTOR 10K	1	
VR8001		EVNDXAA00B23	V.RESISTOR 2K	1	
			CRYSTAL OSCILLATORS		
X710		EFCH38MGP1	CRYSTAL OSCILLATOR	1	
X711		VLF0638	CRYSTAL OSCILLATOR	1	
X716,17		EFCA40R40M1	CRYSTAL OSCILLATOR	2	
X801		VSX0162	CRYSTAL OSCILLATOR	1	
X3901		VSX0099	CRYSTAL OSCILLATOR	1	
X6001		VSX0383	CRYSTAL OSCILLATOR	1	
X6002		VSX0258	CRYSTAL OSCILLATOR	1	
X6003		VSQ0565	CRYSTAL OSCILLATOR	1	
X7301,02		EFCS5R5MS5B	CRYSTAL OSCILLATOR	2	
X7303,04		EFCS5R74MS5B	CRYSTAL OSCILLATOR	2	
X7305		ELB5A016	CRYSTAL OSCILLATOR	1	
X7851		EFOA4R0M03C2	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		ENC17984	RF CONVERTER	1	<!>
		VJH0617	ANT TERMINAL	1	
		VWJ201W140BB	FLAT CARD (CABLE) 20P	1	(P6005-P7501)
		VWJ18AW160BB	FLAT CARD (CABLE) 18P	1	(P6006-P7502)
		VWJ04NB080QQ	FLAT CARD (CABLE) 4P	1	(P6004-P1508)
		VSQ0687	FERRITE RING	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEJ1234	INPUT/OUTUT JACK PLATE	1	FOR INPUT/OUTPUT
		VMT0459	SPACER	1	FOR INPUT/OUTPUT
		VSC3440	SHIELD BARRIER	1	FOR LUMI. & CHRO.
		VMZ1913	PCB BARRIER	1	FOR LUMI. & CHRO.
		VMC0075	HEAT SINK SPRING	1	FOR SUB SERVO & SYS.
		VMZ1352	HEAT SINK COVER	1	FOR SUB SERVO & SYS.
		VSC2734	IC HEAT SINK	1	FOR SUB SERVO & SYS.
		VJR0189	PACK PIN 10P	1	FOR VPS C.B.A.
		ENV57884H6	TUNER	1	<!> FOR TV DEMO.
		VSC3242	SHIELD COVER (MAIN)	1	FOR TV DEMODULATOR
		VSC3241	SHIELD COVER (TOP)	1	FOR TV DEMODULATOR
		VSC2714	SHIELD COVER (BOTTOM)	1	FOR TV DEMODULATOR
	■	VEP05178A	HEAD AMP C.B.A.		(NLA)
			CAPACITORS		
C501,02		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C503		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C504-08		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	5	
C509		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C510,11		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	2	
C512		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C513		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C514		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C515,16		ECUM1C474ZFN	C.CAPACITOR 16V 0.47U	2	
C517,18		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C519,20		ECUM1C474ZFN	C.CAPACITOR 16V 0.47U	2	
C521		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C522		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C524		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C526		VCEA0JAC221	E.CAPACITOR 6.3V 220U	1	
C531		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C532		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C533,34		ECUM1H121JCN	C.CAPACITOR CH 50V 120P	2	
C535		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C536		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C537		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C538,39		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C540		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C551		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C552-54		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C555		ECEA0JPK221	E.CAPACITOR 6.3V 220U	1	
C556,57		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C558		ECEA0JPK470	E.CAPACITOR 6.3V 47U	1	
C559		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C560,61		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	2	
C562,63		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C564		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C565		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C566		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
			INTEGRATED CIRUICTS		
IC501		AN3337NSB	IC	1	
IC502		AN3370K	IC	1	
IC551		BA7743FS	IC	1	
			COILS		
L501-03		VLQ0188K330	COIL 33UH	3	
L504		VLQ0188J5R6	COIL 5.6UH	1	
L511-14		VLQ0555	COIL	4	
L515,16		ERJ8GEY0R00	M.RESISTOR CH 1/8W 0	2	
L551,52		VLQ0188K330	COIL 33UH	2	
			CONNECTORS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P501		VJP1394T	CONNECTOR (MALE)	1	
P502		VJS2603	CONNECTOR (FEMALE)	1	
P551		VJP1248T	CONNECTOR (MALE) 8P	1	
			TRANSISTORS		
Q501		MSB709	TRANSISTOR	1	
Q502		MSD601	TRANSISTOR	1	
			RESISTORS		
R501		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R502		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R503		ERJ6GMYG752	M.RESISTOR CH 1/10W 7.5K	1	
R504		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R505		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R506		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5600	1	
R507		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R508		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R509-12		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	4	
R517		ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R518,19		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R520		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R521,22		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	2	
R523		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R524		VRE0034E182	M.RESISTOR CH 1/10W 1.8K	1	
R525		VRE0034E103	M.RESISTOR CH 1/10W 10K	1	
R526		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R527		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R529		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R551		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R552		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R553		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R554		ERJ6GMYJ243	M.RESISTOR CH 1/10W 24K	1	
R556		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R557		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R558		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R559,60		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R561		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R562		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R563		VRE0034E100	M.RESISTOR CH 1/10W 10	1	
R564		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R565		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R566		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R567		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
			MISCELLANEOUS		
		VSC3477	SHIELD COVER (TOP)	1	
		VSC3478	SHIELD COVER (MAIN)	1	
		VSC3479	SHIELD COVER (BOTTOM)	1	
	■	VEP07674B	TIMER C.B.A.		(NLA)
			CAPACITORS		
C7501		ECRHA030E41	TRIMMER 3P	1	
C7502		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7503		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7504		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7505		ECEA1VK100	E.CAPACITOR 35V 10U	1	
C7506		ECUM1H050DCN	C.CAPACITOR CH 50V 5P	1	
C7507		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C7508,09		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	2	
C7511,12		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	2	
C7513		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7514,15		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7516		ECUM1H821KBN	C.CAPACITOR CH 50V 820P	1	
C7517		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C7518,19		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	2	
C7520		ECUM1E223KBN	C.CAPACITOR CH 25V 0.022U	1	
C7521		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C7522		ECUM1H104ZFN	C.CAPACITOR 50V 0.1U	1	
C7525,26		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7527		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C7528		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C7529-41		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	13	
			DIODES		
D7503		MA73	DIODE	1	
D7506,07		MA73	DIODE	2	
D7509		MA73	DIODE	1	
D7511		MA73	DIODE	1	
D7514		MA73	DIODE	1	
D7517,18		MA73	DIODE	2	
D7521		MA73	DIODE	1	
D7524		MA73	DIODE	1	
D7527		MA73	DIODE	1	
D7531,32		MA73	DIODE	2	
D7534		MA73	DIODE	1	
D7536,37		MA73	DIODE	2	
D7538		1SS254	DIODE	1	
D7539,40		MA73	DIODE	2	
D7541		MA3068	DIODE	1	
D7542		MA73	DIODE	1	
D7544,45		LN28RCPL	DIODE	2	
D7546		LN38GCPL	DIODE	1	
D7548,49		LN28RCPL	DIODE	2	
D7557		MA73	DIODE	1	
			DISPLAY TUBES		
DP7501		VSL0144	DISPLAY TUBE	1	
			INTEGRATED CIRCUITS		
IC7501		MN187164VLGT	IC	1	
IC7502		MN1280L	IC	1	
IC7503		MN1280S	IC	1	
IC7504		M34225V1AH	IC	1	
IC7505		M6M80021P	IC	1	
IC7506		BA6810F	IC	1	
			COILS		
L7501		ELESP221KA	COIL 220UH	1	
L7502		VLQ0188J101	COIL 100UH	1	
L7503		ELESQ101KA	COIL 100UH	1	
			CONNECTORS		
P7501		VJS3193B020A	CONNECTOR (FEMALE)	1	
P7502		VJS3193B018A	CONNECTOR (FEMALE)	1	
P7504		VJS2183	CONNECTOR (FEMALE)	1	
P7505		VJP2621	CONNECTOR (MALE)	1	
P7506		VJP3267A012W	CONNECTOR (MALE)	1	
			COMBINATION PARTS		
QR7501		MRN1404	TRANSISTOR	1	
QR7503,04		MRN2403	TRANSISTOR-RESISTOR	2	
QR7505		MRN2402	TRANSISTOR	1	
			RESISTORS		
R6701		ERJ6ENF1363	M.RESISTOR	1	
R7501		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7502		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R7504		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R7506,07		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	2	
R7508		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R7509,10		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	2	
R7511-15		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	5	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7519-22		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	4	
R7524		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R7525-29		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	5	
R7530		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7531		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7532		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7533		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R7534		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R7535		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7536		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7537-39		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	3	
R7540		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R7541		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R7542		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R7543,44		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	2	
R7545		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7546		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R7547		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7550		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7552		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7556		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7558,59		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R7564		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7565		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7571		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R7572		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
			COMBINATION PARTS		
RX7501		EXBF11E104J	COMBI.R-R	1	
RX7502		EXBF8E104J	COMBI.R-R	1	
			VARIABLE RESISTORS		
VR7501		EVNDXAA00B53	V.RESISTOR 5K	1	
			CRYSTAL OSCILLATORS		
X7501		VSX0094	CRYSTAL OSCILLATOR	1	
X7502		VSX0484	CRYSTAL OSCILLATOR	1	
X7503		EF0GC3584A5		1	
			MISCELLANEOUS		
		VMD1342	LED SPACER	1	
		VEK5789	IR RECEIVER UNIT	1	(NLA)<!>
		VJF0693	FIP HOLDER	1	
	■	VEP00S02B	VR C.B.A.		(NLA)
			CAPACITORS		
C6511		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C6512		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C6513		ECEA1EK3R3	E.CAPACITOR 25V 3.3U	1	
C6514,15		ECQB1H223JH	P.CAPACITOR 50V 0.022U	2	
C6516		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C6517		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C6518,19		ECQV1H124JS	P.CAPACITOR 50V 0.12U	2	
C6520		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
			DIODES		
D6501		LN21RCPHL	LED	1	
D6502,03		1SS254	DIODE	2	
D6511		1SS254	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			INTEGRATED CIRCUTIS		
IC6511		VCR0172	IC	1	
			COILS		
L6501-03		VLP0083	FILTER	3	
L6511,12		ELESP471KA	COIL	2	
			CONNECTORS		
P6501		VJP3267A012W	CONNECTOR (MALE)	1	
P6511		VJP1252T	CONNECTOR (MALE) 12P	1	
P6512		VJP3042A007W	CONNECTOR (MALE)	1	
			RESISTORS		
R6501		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R6502		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R6511		EROS2CKG3301	M.RESISTOR 1/4W 3.3K	1	
R6512,13		EROS2CKG2700	M.RESISTOR 1/4W 270	2	
R6514		EROS2CKG3301	M.RESISTOR 1/4W 3.3K	1	
R6516		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R6518,19		EROS2CKG3300	M.RESISTOR 1/4W 330	2	
			SWITCHES		
SW6501		EVQQS307K	SWITCH	1	
SW6502-04		ESD170206	SWITCH	3	
SW6505,06		ESD170306	SWITCH	2	
			VARIABLE RESISTORS		
VR6511		EWANYJX0554J	V.RESISTOR	1	
VR6512		EVUF3AE20B24	V.RESISTOR 20K	1	
VR6513		EVJY50E20C23	V.RESISTOR 2K	1	
			MISCELLANEOUS		
		KL-04	LED SPACER	1	
		VGU4537	SLIDE KNOB	5	
		VGU4495	REC VR KNOB	2	
		VYC0160	REC VR PANEL UNIT	1	
	■	VEP00S03A	MIC C.B.A.		(NLA)
			CAPACITORS		
C6301,02		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
			JACKS		
J6302		VJJ0274	MIC JACK	1	
J6401		VJJ0238	HEAD PHONE JACK	1	
			COILS		
L6301,02		ELESP221KA	COIL 220UH	2	
			CONNECTORS		
PS6301		VJS3042B007W	CONNECTOR (FEMALE)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP00S04A	FRONT INPUT C.B.A.		(NLA)
			CAPACITORS		
C4801,02		ECCF1H101JC	C.CAPACITOR 50V 100P	2	
C4803,04		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	2	
			COILS		
L4801,02		VLQ0188J101	COIL 100UH	2	
			CONNECTORS		
P4801		VJP2622	CONNECTOR (MALE)	1	
P4802		VJP3103	CONNECTOR (MALE)	1	
			RESISTORS		
R4801		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R4802,03		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	2	
			MISCELLANEOUS		
		VEJ1236	FRONT JACK PLATE	1	
		VSC3623	FRONT JACK SHIELD COVER	1	
	■	VEP00S33B	JOG C.B.A.		(NLA)
			DIODES		
D6702		LN38GCPP	LED	1	
D6704,05		LN38GCPP	LED	2	
			CONNECTORS		
P6701		VJS2621	CONNECTOR (FEMALE)	1	
			RESISTORS		
R6702		ERDS2T0	C.RESISTOR 1/4W 0	1	
R6706,07		ERDS2TJ271	C.RESISTOR 1/4W 270	2	
R6709		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
			SWITCHES		
SW6701		EVQQS307K	SWITCH	1	
			MISCELLANEOUS		
		KL-02	LED SPACER	3	
		VSQ0798	JOG ENCODER	1	
	■	VEP01487A	POWER C.B.A.		(NLA)<!>
			CAPACITORS		
C1101		ECQU2A154MNB	P.CAPACITOR 250V 0.15U	1	<!>
C1102		ECQU2A104MN	P.CAPACITOR 250V 0.01U	1	<!>
C1103		ECES2GG680	CAPACITOR	1	
C1106		VCC0021	C.CAPACITOR	1	<!>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C1107		ECQE6473KF	P.CAPACITOR 50V	1	
C1108		VCK0106K121	CAPACITOR	1	
C1109		ECA1VXLV470	E.CAPACITOR 35V 47U	1	
C1110		ECA1CXLV101	E.CAPACITOR 16V 100U	1	
C1111		ECEA1JFE470	E.CAPACITOR 63V 47U	1	
C1112		ECEA1CFE560	E.CAPACITOR 16V 56U	1	
C1113,14		ECEA1DFZ681	E.CAPACITOR 20V 680U	2	
C1115,16		ECEA1AFZ681	E.CAPACITOR 10V 680U	2	
C1117		ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C1118		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C1119		VCF2AAC101JT	P.CAPACITOR	1	
C1120		ECKF1H391KB	C.CAPACITOR 50V 390P	1	
C1121		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C1133		VCC0021	C.CAPACITOR	1	<!>
C1136		VCC0022	C.CAPACITOR 1000P	1	<!>
			DIODES		
D1102		S1WBA60S	DIODE	1	<!>
D1103		AP01C	DIODE	1	
D1104		MA4200H	DIODE	1	
D1105		MA723VT	DIODE	1	
D1106		MA178	DIODE	1	
D1107		AU01Z	DIODE	1	
D1108		MA185	DIODE	1	
D1109		30DF2	DIODE	1	
D1110		31DQ04	DIODE	1	
			INTEGRATED CIRCUITS		
IC1101		STRS6545LF	IC	1	<!>
IC1102		SI3120C	IC	1	
IC1103		UPC1093J	IC	1	
			COILS		
L1101		ELF18D221F	COIL 220UH	1	<!>
L1102,03		VLQ0410	COIL	2	
L1104,05		ELESE101KA	COIL 100UH	2	
L1106		VLP0074	COIL	1	
L1107		VLP0083	COIL	1	
L1111		ELF18D290A	COIL	1	<!>
L1112-15		VLP0085	COIL	4	
			CONNECTORS		
P1101		VJS2625	CONNECTOR (FEMALE)	1	<!>
P1102		VJP1250T	CONNECTOR (MALE) 10P	1	
			TRANSISTORS		
Q1101		PS2561L1	TRANSISTOR	1	<!>
			RESISTORS		
R1101		ER0S2CKG3001	M.RESISTOR 1/4W 3K	1	
R1102		ERG3SJ683	M.RESISTOR 3W 68K	1	
R1103		ERDS2TJ224	C.RESISTOR 1/4W 220K	1	
R1104		ERDS2FJ221	C.RESISTOR 1/4W 220	1	
R1105		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R1106		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1107		ERW1PK1R5	W.RESISTOR 1W	1	
R1108		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1109		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R1110		ER0S2CKG2701	M.RESISTOR 1/4W 2.7K	1	
R1111		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R1112		ER0S2CKG2401	M.RESISTOR 1/4W 2.4K	1	
R1113		ER0S2CKG3302	M.RESISTOR 1/4W 33K	1	
R1114		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
R1115		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R1116		ER0S2CKG62R0	M.RESISTOR 62	1	
R1117		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R1131		ERW1PK2R2	W.RESISTOR 1W	1	
R1132		ERC12AGM334	S.RESISTOR 1/2W 330K	1	<!>
R1133		ERDS2TJ224	C.RESISTOR 1/4W 220K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			TRANSFORMERS		
T1101		VLT0657	TRANSFORMER	1	<!>
			MISCELLANEOUS		
		VJF0318	FUSE HOLDER	1	<!>
		VSC3487	HEAT SINK	1	FOR IC1101
		VMC0811	HEAT SINK SPRING	1	FOR IC1101
		VMZ1184	CAPACITOR COVER	3	<!>FOR C1106,33,36
	■	VEX0117	CYLINDER DRIVE C.B.A.		(NLA)
			CAPACITORS		
C2901-03		ECEA1VSN2R2	E.CAPACITOR 35V 2.2U	3	
C2904-06		ECUM1E104KBM	C.CAPACITOR CH 25V 0.1U	3	
C2907		ECUM1E683KBM	C.CAPACITOR CH 25V 0.068U	1	
C2908		ECUM1E473KBM	C.CAPACITOR CH 25V 0.047U	1	
C2909		ECQV1H104JS	P.CAPACITOR 50V 0.1U	1	
C2910,11		ECEA1CKS100	E.CAPACITOR 16V 10U	2	
C2912		ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
			INTEGRATED CIRCUITS		
IC2901		AN3815K	IC	1	
			CONNECTORS		
P2901		VJP2603W	CONNECTOR (MALE)	1	
P2902		VJP1232T	CONNECTOR (MALE) 5P	1	
			RESISTORS		
R2901		ERX12SJR47	M.RESISTOR 1/2W 0.47	1	
			HEATERS		
TH2901		VRH0017	HEATER	1	
			MISCELLANEOUS		
		VMA8089	MAIN HOLDER	1	
	■	VXA3825	MECHANISM CONNECTION C.B.A.		(NLA)
			MISCELLANEOUS		
		ON2170-RLF	PHOTO INTERRUPTER	2	
		VJS1493	FLEXIBLE CARD 15P	1	
		VMA7829	REINFORCEMENT (F)	1	
		VMA7830	REINFORCEMENT (R)	1	
		VMZ1366	PROTECTION SHEET	1	
	■	VEP00K88C	FE HEAD C.B.A.		(NLA)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CAPACITORS		
C1401		ECEA1CK100	E.CAPACITOR 16V 10U	1	
			COMBINATION PARTS		
CR1401		EXED103Z333	CAPACITOR-RESISTORS	1	
			TRANSISTORS		
Q1401		2SD1991-R	TRANSISTOR	1	
			MISCELLANEOUS		
		EIQ7QF012Q	COIL	1	
		ECQB1H333KZ	P.CAPACITOR 50V 0.033U	1	
		ECQB1H472JZ	P.CAPACITOR 50V 4700P	1	
		VLQ0188J101	COIL 100UH	1	
		VJP1148	CONNECTOR(MALE)(2.5MM) 2P	1	
	■	VEP00P61A	INTERFACE C.B.A.		(NLA)
			MISCELLANOUES		
		VJP1244T	ANGLE 4P	1	
		VLP0083	FERRITE COIL	2	
	■	VEK3578	PHOTO Tr. (S) C.B.A.		(NLA)
			MISCELLANEOUS		
		VMD0645	HOLDER	1	
		PN150NVS	TRANSISTOR	1	
		ECKF1H102KB	CERAMIC CAPACITOR 50V 1000P	1	
	■	-------	PHOTO Tr. (T) C.B.A.		(NLA)
			MISCELLANEOUS		
		VMD0645	HOLDER	1	
		ECKF1H102KB	CERAMIC CAPACITOR 50V 1000P	1	
		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
		VJS2165W	ZIF CONNECTOR 6P	1	
		PN150NVS	TRANSISTOR	1	